National Advisory Council for Environmental Policy and Technology (NACEPT) Meeting

January 20 – 21, 2011
Hilton Garden Inn
815 14th Street, NW
Washington, DC 20005

FINAL MEETING SUMMARY

THURSDAY, JANUARY 20, 2011

Welcoming Remarks and Introductions
Mark Joyce, U.S. Environmental Protection Agency (EPA), Associate Director of the Office of Federal Advisory Committee Management and Outreach (OFACMO) and Acting Designated Federal Officer (DFO) for the National Advisory Council for Environmental Policy and Technology (NACEPT); and Cynthia Jones-Jackson, EPA, Acting Director, OFACMO

Ms. Cynthia Jones-Jackson (EPA, OFACMO) called the meeting to order at 9:01 a.m., welcomed the Council members, and thanked them for their participation, particularly in terms of their work on vulnerable populations. She thanked the speakers and EPA staff for their contributions and noted that the agenda is robust. She acknowledged Mr. Rafael DeLeon, the former Director of OFACMO, who now is the Director of the Office of Civil Rights (OCR).

Overview of Agenda
James H. Johnson, Jr., NACEPT Chair

Dr. James Johnson (Howard University), NACEPT Chair, presented Mr. DeLeon with a certificate of appreciation on behalf of NACEPT. Mr. DeLeon expressed his pleasure at working with NACEPT and thanked the members, as well as OFACMO staff, for their hard work. He noted that the Workforce Management Advice Letter, on which the Council is working, will be forwarded to his office.

Dr. Johnson reviewed the agenda, noting that Administrator Lisa Jackson will present her vision to NACEPT. The remainder of the morning will be devoted to a panel discussion on vulnerable populations. Following lunch there will be a presentation on the application of science and technology to community exposure and risk assessment, followed by an overview of the NACEPT Workforce Management Advice Letter. There will be opportunity for public comment at 3:45 p.m., followed by discussion and approval of the advice letter. The day will end with the two workgroups—Workforce Issues and Vulnerable Populations—meeting in separate, concurrent sessions. On Friday morning, the workgroup session will continue, then the members will reconvene in the plenary for the workgroup updates, public comments, and the Chair's summary and next steps.

Mr. Mark Joyce (EPA, OFACMO) asked the members whether there were any questions or preliminary discussion regarding what must be accomplished during the meeting. Dr. Marian Chertow (Yale University), NACEPT member, inquired about the EPA staff's view of Administrator Jackson's priorities. Mr. Joyce replied that the Administrator is working diligently on a long list of challenges, including

ongoing response and restoration efforts related to the Gulf oil spill. In addition to describing her priorities for the Agency, she will discuss her two charges to NACEPT.

Ms. Vivian Loftness (Carnegie Mellon University), NACEPT member, asked for an update on the Marcellus shale drilling. Dr. Fred Hauchman (EPA, Office of Science Policy) explained that an interagency briefing on a hydraulic fracturing study plan is under way, which is a priority topic at EPA.

Mr. DeLeon mentioned that the Office of the Inspector General (OIG) is investigating a letter on nanotechnology; he was not certain why OIG was leading the investigation rather than the Office of Research and Development (ORD). He also noted that, although the former Director of OCR did not charter a group to examine diversity nor collaborate with NACEPT, OCR is working on a statistical study regarding diversity. Mr. Robert Olson (Institute for Alternative Futures), NACEPT member, pointed out that the fourth part of the charge focuses on diversity.

Ms. Sara Kendall (Weyerhaeuser Company), NACEPT member, inquired about additional requests of the Council from EPA; she also asked how EPA plans to deal with the Executive Order regarding balancing economic issues with regulatory mandates. Dr. Johnson thought these would be good questions for Administrator Jackson. Other areas that NACEPT has discussed include cross-cutting issues such as energy and interagency collaboration. Regarding the vulnerable populations charge, Mr. Joyce added that areas of successes can be highlighted, but the main goal is to determine where ORD can provide solutions to unresolved matters.

Ms. Arleen O'Donnell (Eastern Research Group, Inc.), NACEPT member, asked whether future charges for NACEPT were known. Dr. Johnson explained that these will develop out of discussions with the Administrator's staff. He commented that the Agency is struggling to deal with problems that are beyond its boundaries. Dr. Mark Mitchell (Connecticut Coalition of Environmental Justice), NACEPT member, provided an example of vulnerable populations during emergency responses.

Ms. Erica Bannerman (City of Alexandria Office of Environmental Quality), NACEPT member, thought it was important to share NACEPT's efforts on diversity. Mr. DeLeon said that his office has been tasked with providing statistical analysis on mission critical occupations (MCOs), recruitment, and selection and qualification rates. He would like to charter a subgroup through NACEPT to examine these topics. The Agency has to be able to compete with the private sector to attract and hire talented employees. He and Mr. Raul Soto are meeting with regional human resources directors to discuss ways to improve outreach to qualified candidate pools; he is willing to report on their progress during the next NACEPT meeting.

EPA Administrator's Remarks
Lisa P. Jackson, EPA Administrator

Administrator Jackson promised to be more inclusive with respect to stakeholders, and she expressed her desire to discuss workforce issues. She noted that technology is an important part of NACEPT's name, and it plays a role in the EPA standards and regulations that protect Americans. Another important topic for the Agency is climate change; there is considerable regulatory uncertainty with respect to climate change, but EPA has been mandated to deal with this issue. EPA needs to enact smart regulations to address climate change, including carbon pollution, as the United States considers its energy investments. Greenhouse gases and carbon are regulated, partially through a clean cars program. EPA has a large laboratory in Ann Arbor, Michigan, that works on reducing vehicle emissions. Most of this laboratory's workforce is hired from the automobile and trucking industry, and more patents have resulted from this laboratory than from all other EPA laboratories combined. To set standards that reduce vehicle emissions, it is necessary to prove the technologies and demonstrate that they are affordable. The laboratory in Ann Arbor has demonstrated that emissions from lawnmowers can be significantly reduced with technology, but there currently are no incentives for the private sector to build cleaner lawnmowers, or cars for that matter. This highlights the important intersection of policy and technology.

Standards for mercury are long overdue; the previous standards enacted during the last administration were found to be illegal. Soot and fine particles are deadly, and smog and ozone have contributed to the increased incidence of asthma in the United States. The American consumer also has many concerns, including the safety of chemicals in the many products that they use every day. Clean, safe drinking water is another concern for five to eight percent of our nation.

EPA's laboratory in Cincinnati, Ohio, is working with the Proctor and Gamble Company, other businesses, state and local governments, water utilities, and community development groups in the Cincinnati, Dayton, and northern Kentucky areas to develop a water technology innovation cluster, which is expected to increase innovative water technologies, create jobs, and improve the economy.

EPA is expanding the conversation on environmentalism and increasing efforts for environmental justice (EJ). Administrator Jackson thanked NACEPT for its work in this area. There are pockets of contamination that exist, and it is necessary to address these to increase environmental quality throughout the country.

EPA needs to address workforce issues to ensure that the Agency has a diverse, qualified workforce to address future challenges. The Agency also needs to develop a framework that will move EPA along a path that will reduce risk and increase sustainability. EPA needs to move beyond regulation and think about global solutions that can address multiple problems. For example, clean energy not only improves the environment and public health, it also creates jobs, decreases our nation's dependence on foreign oil, and increases our national security. Although Administrator Jackson said she does not have a specific new charge for NACEPT yet, she noted that EPA may seek input from the Council on the new Executive Order asking agencies to review their regulations in a broader context.

Discussion

Ms. Loftness asked for EPA's views on research that focuses on the effects of land use on indoor air quality. She thought examining land use can be very beneficial. Administrator Jackson responded that a major challenge in this difficult fiscal environment is how to manage issues that are important to human health but for which EPA has no statutory mandate. It will be a challenge for all agencies to try to accomplish more with less funding. For example, radon is a simple, EJ issue; there is no federal mandate for disclosure of radon in rental properties, which makes it a livability issue. EPA is working with the U.S. Department of Housing and Urban Development to address this issue, and with other agencies, such as the U.S. Department of Transportation (DOT) to address other livability issues. She noted that the President approves this synergistic approach.

Ms. O'Donnell asked Administrator Jackson to provide her insights on climate change. Administrator Jackson responded that much is happening at EPA and other agencies. States have permitting programs to reduce releases that contribute to climate change problems, and the federal and private sectors are making investments in clean energy. There also are efforts to address adaptation to climate change. The U.S. Department of Agriculture (USDA) is investing in rural America, and the U.S. Army Corp of Engineers (USACE) and Department of the Interior are focusing their efforts on water works. The hope is that the White House will release a framework, but she was unsure whether anything new would be forthcoming.

Mr. Kurt Erichsen (Toledo Metropolitan Area Council of Governments), NACEPT member, asked about the Great Lakes, noting that EPA is strengthening nonpoint source loading controls in the Chesapeake Bay. Administrator Jackson replied that EPA has made a substantial investment in the Great Lakes, sending funding to state and local agencies. Numerous results-oriented projects are under way. She stated that the Chesapeake Bay situation is different from that for the Great Lakes. There are five or six states encompassed in the Chesapeake Bay watershed and because there was no accountability in the system, the President issued an Executive Order to reduce nonpoint source loading. States are best suited to perform the difficult work of moving from totally voluntary measures to somewhat mandatory measures.

The states currently are developing watershed plans. Although there has been some controversy surrounding this effort, EPA is proud of its work. The idea of nutrient standards in watersheds can be beneficial, as water does not respect state boundaries and the nutrient loads can be significant.

Mr. Kobi Wright (Cummins, Inc.), NACEPT member, commented that the trucking industry wants to see greenhouse gas (GHG) regulations in place so that it knows the requirements trucks have to meet. He mentioned that a group of his colleagues visited the laboratory in Ann Arbor and met with EPA. He asked what will happen to the work EPA is doing. Was there a challenge because of the U.S. Supreme Court decision and change of leadership in the House of Representatives? Administrator Jackson responded that EPA already is being sued on this issue. States are moving through the process of developing GHG plans, but some do not want to embark on the process. The new regulations became effective on January 2, 2011. There were some comments from the new Energy and Commerce Subcommittee Chairman about competing to see who could roll back the most regulations the fastest. There needs to be regulations because the Agency cannot get companies to meet standards just by saying that a regulation is looming on the horizon. Companies need to be honest regarding what regulatory certainty means. Regulations and standards do not happen in a vacuum; they need to be reasonable and feasible from a cost perspective.

Dr. Chertow commented that the most rewarding aspect for her of being on the NACEPT was seeing the strength of the EPA staff. More than ever before, she is observing how much environmental issues are blending into other issues. Administrator Jackson said that conservation is a strong ethic in this country. She emphasized that it is important to meet people where they are, and help them understand the science behind the issues.

Ms. Bannerman noted that when EPA was founded a little more than 40 years ago, the intention was for the Agency to be organized by function rather than media (i.e., land, water, and so forth). Is anything being done to change the Agency's current organization structure? Administrator Jackson responded that she is working to optimize the current organization of the Agency.

Ms. Ella Filippone (Passaic River Coalition), NACEPT member, said that, in terms of dredging technologies for the cleanup of rivers, harbors, and streams, the European Union has more efficient and less polluting technologies. She mentioned that there was a recent session with EPA about using 21st Century, innovative technology. The current system makes it difficult to use new technologies from the private sector. What is being done to address this problem? Administrator Jackson applauded New York for incorporating this new dredging technology in the Hudson River decision. She noted that the Interstate Technology and Regulatory Council was designed to advance the use of innovative environmental technologies in different states and to simplify the permitting process. This is a potential resource to address such problems, as is the USACE.

Ms. Kendall thought that NACEPT could play a role in advising EPA with respect to the new Executive Order, which includes regulations that contribute to clean healthy communities. She asked whether EPA is evolving toward sustainability in future regulations. Administrator Jackson responded that sustainability is to be considered in rulemaking. For example, media transfer is considered; technologies designed to solve one environmental problem in one medium can increase pollution in another medium. Whether this tradeoff makes sense must be considered. Also, EJ must be operationalized so that it is included in regulations.

Dr. Karl Benedict (University of New Mexico), NACEPT member, explained that he works with public-private partners in meeting the joint goals of transparency and making data available for others, enabling research, and empowering communities. He asked what strategies EPA has for streamlining and making its policies usable. Administrator Jackson commented that transparency is best for the Agency and the public, but there are some legal restrictions, such as the restrictions associated with confidential business information. What constitutes confidential business information must be clarified. Companies make broad claims of confidentiality, and it is the Agency's responsibility to prove that the material is not

confidential. With regard to compliance, EPA is migrating its data into publicly available systems. She noted that throughout the normal process of peer review, all information is made available to the public. The Administrator thought EPA had made more progress in this area than most other federal agencies.

Dr. Johnson thanked the Administrator for her enthusiastic and passionate comments.

Vulnerable Populations Panel Discussion

Mark A. Mitchell, NACEPT Vulnerable Populations Co-Chair;
Fred Hauchman, EPA, ORD, Director, Office of Science Policy (OSP);
Peter Grevatt, EPA, Office of the Administrator, Director, Office of Children's Health Protection (OCHP);
Heather Case, EPA, Office of Enforcement and Compliance Assurance (OECA), Acting Director, Office of Environmental Justice (OEJ); and
Victoria Robinson, EPA, OECA, DFO, National Environmental Justice Advisory Council (NEJAC)

Dr. Johnson introduced the five panelists. Dr. Mitchell explained that the Vulnerable Populations Workgroup has been working on how to determine what is needed in terms of technology and how to define vulnerable populations. Dr. Mitchell and Dr. Hauchman described what would be useful in terms of technologies, including those that would enhance data collection, where information could be obtained, and data management. The Workgroup decided to develop case studies, identify issues in EJ communities, determine the technological needs to address these issues, and make recommendations. A number of case studies have been submitted. One goal for the Workgroup to accomplish at this meeting is to examine the case studies and determine which are the most illustrative of the issues that can be addressed through technologies. More case studies may need to be collected after the Workgroup has examined those it has received. The ultimate goal is to identify technological needs that would help to address EJ and vulnerable population issues.

Dr. Hauchman was pleased with the track taken by the Workgroup and NACEPT. He suggested that the Workgroup consider, as the case studies are being developed, the overall priority for a community. Examine whether the issue is one that could be considered in many communities throughout the country. The Workgroup might elaborate on a previous meeting's discussion about how EPA will use the advice that NACEPT will be providing. Dr. Paul Anastas has emphasized his priorities of technology and sustainable solutions and he will be interested in NACEPT's report on vulnerable populations. EPA wants to align its research activities with the priorities of the Agency. There is a flurry of activity at EPA now as it reformulates how the Agency manages its research portfolio. In the past, the Agency has pursued multiple, disparate research programs; the new structure will have six integrated, transdisciplinary programs across multiple areas. The six major components of EPA's new research portfolio are: air, climate, and energy; chemical safety for sustainability; sustainable communities; safe and sustainable water; risk assessment; and national homeland security research. Interim National Program Directors (NPDs) are heading up each of these areas. The Agency is reevaluating how it plans research and how it involves clients and stakeholders in the "front end" of the research effort. NACEPT can rest assured that the NPDs are including stakeholders at the front end of this research reformulation and the Council's advice is being incorporated as well.

Dr. Hauchman noted that EPA has a large intramural workforce and an elaborate research planning process in which the products of NACEPT's efforts can engage research needs. The extramural grants program has an annual budget of $60 million and has supported work in the area of vulnerable populations. He thought NACEPT's advice could be used to improve the extramural grants program. There is a new Office of Innovation within ORD, which has released an internal grants program for ORD researchers that encourages them to develop innovative solutions. The program is outside of direct regulatory support activities and is intended to stimulate creative thinking and influence EPA researchers to think about issues and solutions in an innovative manner.

Dr. Johnson noted that more than 100 proposals were received for the Pathfinders Innovation Project and they contained a number of innovative ideas.

Ms. Loftness wondered where indoor environmental quality would fit into the new ORD framework. Dr. Hauchman replied that there is a small program for indoor air-related activities that would fall under the air, climate, and energy program. Asthma is part of the program devoted to sustainable communities, and the activities associated with such indoor air issues are coordinated across programs.

Dr. Mitchell asked whether there would be an opportunity to discuss and provide input on these issues, as the technology recommendations will be related to these areas. Dr. Hauchman said that a meeting might be held to discuss air or sustainable communities; however, the process still is being developed. He was unsure how public comment would be obtained and the Board of Scientific Counselors and Science Advisory Board (SAB) will be consulted.

Ms. Kristie Orosco (San Pasqual Band of Mission Indians), NACEPT member, asked whether environmental impact would be included in the projects that are funded. Dr. Hauchman confirmed that it would. He added that EPA is trying to look at priorities from a systems-level approach. Dr. Anastas has been very supportive of applying decision analysis to prioritizing research, particularly because of the transparency of such an approach. Dr. Hauchman acknowledged that more needs to be done in terms of formalizing a process for including environmental impact.

Ms. Heather Case (EPA, OECA, OEJ) said that the NACEPT members will be using their credentials to help the Agency address EJ. A memorandum from Administrator Jackson stated that the expansion of EJ and protection of vulnerable populations are Agency priorities. What does vulnerable mean in terms of EJ? According to the World Health Organization, health, environmental, and social factors affect EJ. The National Environmental Justice Advisory Council (NEJAC) has a similar definition of vulnerability.

If protection of vulnerable subpopulations is a top priority, then EPA must strive for preventing and reducing adverse environmental and health impacts, ensuring equal access to decision-making, and increasing the economic, social, health, and environmental benefits in communities. *Plan EJ 2014* is a roadmap for advancing EJ, and all programs must take responsibility for implementing it. Accountability mechanisms are included, and five cross-Agency focus areas are outlined in the plan: rulemaking, permitting, compliance/ enforcement initiatives, community-based action, and administration-wide action on EJ.

Dr. Johnson asked whether EPA is the lead agency in the Federal Government for EJ. Ms. Case responded that all federal agencies have EJ responsibilities.

The EJ plan includes four tool development areas: science, law, information, and resources. These areas frame the Agency's efforts. Science and regulations lead to a discussion about technology. In terms of rulemaking, mechanistic questions are placed into the process. This is the first time full guidance was released, and it focuses more on the process and less on the "how to." For all rules with potential EJ concerns, three questions frame the development of the rule: How will the public participation process provide transparency and meaningful participation for minority, low-income, and indigenous populations and tribes? How will existing and new disproportionate environmental and public health impacts on minority, low-income, and indigenous populations be identified and addressed during the rulemaking process? How did the actions taken under the first two questions impact the outcome or final decision? Dr. Johnson added that the first document is the "what"; the second document will be the "how."

In terms of tools development in the area of science, EPA commissioned a symposium on EJ in 2010 to articulate how and why minority and/or low-income groups experience disproportionately higher environmental health risks. EPA also commissioned the development of papers on proximity to pollution sources, unique exposure pathways, multiple and cumulative exposures and impacts, physical

infrastructure, lack of community capacity, and diminished ability to participate in decision-making. ORD and others in the Agency are developing a technical guide to including EJ in rulemaking that will provide a framework for integrating EJ into analyses. The overarching goal is to design the analysis so as to facilitate its application in decision-making. The guide is expected to be ready for SAB review by spring 2012.

Ms. Filippone said that this discussion touches on some very difficult issues. There are very few technological solutions to address legacy pollutants, and it is necessary to examine social, political, and psychological factors in addition to technical factors. People want solutions; doing another study on EJ is not enough. It is frustrating that there is little or nothing that can be provided easily to local agencies and states that are not performing at necessary levels. Ms. Filippone said she was unsure whether what Ms. Case outlined will help the situation in an expeditious manner. Ms. Case responded that the Agency often hears about very difficult situations. She did not provide details about community-based action in *Plan EJ 2014*, but she could return and discuss those efforts in more detail. She added that EPA is working hard to enlist federal, state, and local partners to address EJ issues. She explained that, as another sign of commitment to EJ, Ms. Lisa Garcia has been elevated to the position of Associate Assistant Administrator of Environmental Justice, and Mr. Charles Lee has been elevated to Deputy Associate Administrator for Environmental Justice to align EPA's management structure with its commitment to EJ. Ms. Case added that Mr. Lee is dedicated to *Plan EJ 2014*, including outreach to program manager partners and working on interagency collaborations.

Mr. Wright asked Ms. Case to describe EPA's most significant compliance enforcement issue in regard to EJ. Ms. Case explained that Ms. Cynthia Giles, the Assistant Administrator for the Office of Enforcement and Compliance Assurance (OECA), and Ms. Garcia would be better able to answer that question. She noted that EJ is one of OECA's programs and enforcement and compliance are part of *Plan EJ 2014*. Both EPA and OECA are responsive to citizen complaints.

Ms. Orosco asked whether EPA will conduct the rulemaking and then provide guidance to states responsible for implementing the regulations. Ms. Case responded that states would be engaged in rulemaking and any proposed rules would be submitted for public comment, but the regulations are the responsibility of EPA. The Office of Air and Radiation (OAR) and the Office of General Counsel (OGC) are responsible for drafting an implementation plan for considering EJ in permitting.
Ms. Orosco commented that Earth-based solutions are used in her community. She suggested that the Agency should reach out to communities because this can create a successful solution that the community will own and often can be accomplished at lower cost. She encouraged EPA to include this concept in the guidance.

Ms. Bannerman asked whether there was any research in progress on land use policy. Ms. Case responded that the land use question comes up repeatedly, particularly in the context of EJ, but it is not in the Agency's direct statutory mandate.

Ms. O'Donnell stated that most permits are renewable, and stricter standards or keener impacts, both which take a long time, are needed. There is not a quick solution. Ms. Case responded that *Plan EJ 2014* includes federal permits, but this is a challenging frontier. As she mentioned earlier, OAR and OGC are leading this effort.

Mr. Roger Rivera (National Hispanic Environmental Council), NACEPT member, asked Ms. Case to identify the top item of her "wishlist." She did not have an immediate response but said she would think about it.

Mr. Howard Learner (Environmental Law and Policy Center), NACEPT Co-Chair, asked about an alternative manner to examine land use. Ms. Case responded that a workgroup could be developed to examine land use and EJ issues in communities.

Dr. Peter Grevatt (EPA, OCHP) stated that very few issues are more compelling to the public than children's health. EPA has made a significant amount of progress in protecting the environment and human health, including children's health. There has been tremendous success in terms of reducing children's blood lead levels since 1976. Although the number of children with asthma is increasing, attack prevalence is lower because the disease is better managed. There is, however, disproportionate impact; Puerto Rican communities have twice as many childhood asthma cases compared to the national averages, and African American communities experience four to six times as many fatal cases. Although pediatric cancers have increased in the United States, mortality is decreasing because of better cancer management. An increasing number of children are reported to have attention deficit and hyperactivity disorder (ADHD), which is no surprise. Autism has increased 10-fold in 10 years, but there are issues surrounding diagnosis. The research of the EPA-funded Children's Health Research Centers has shown that the environment is one of the most important causes behind these increases.

On February 4, 2010, Administrator Jackson released a memorandum regarding EPA's leadership in children's environmental health. EPA will: (1) use the best science to ensure that regulations and other Agency actions protect children's environmental health; (2) establish standards, policies, and guidance to help eliminate harmful prenatal and childhood exposures to pesticides and other toxic chemicals; and (3) coordinate community-based programs to help eliminate threats to children's health and measure progress. Some of the children's health risk assessment guidance documents and methodologies are quite old, and the science has advanced significantly since their release. ORD recently sponsored a colloquium on the topic. In response to a question from Dr. Johnson regarding whether the guidance and methodologies were over- or underprotective of children, Dr. Grevatt explained that they did not reflect the latest findings and science. He added that current studies rarely are performed on developingchildren. It is necessary to find new tools and new information, especially in terms of epigenetics.

New regulations have been introduced to protect children's health, particularly in terms of air pollution and hazards. There are new tools emerging that should be used to perform risk assessments to better protect children's health. It is necessary to determine the reasons behind the high incidences of asthma, ADHD, and autism. The 1996 Food Quality Protection Act mandates that the EPA Administrator ensure that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure to pesticide chemical residue, and publish a specific determination regarding the safety of the pesticide chemical residue for infants and children. Dr. Grevatt noted that there are essential principles for reform of chemicals management legislation.

The Interagency Healthy Homes Initiative is expanding lead-based paint rules to include mold and asbestos. Healthy High-Performance Schools, part of the Toxic Substances Control Act (TSCA), provides voluntary guidelines for state school environmental health programs, but these can be difficult to achieve for states and schools with limited funds. EPA and the Agency for Toxic Substances and Disease Registry co-fund 10 Pediatric Environmental Health Specialty Units (PEHSUs) across the country. These PEHSUs form a network that is capable of responding to requests for information throughout North America and offering advice on prevention, diagnosis, management, and treatment of environmentally related health effects in children. PEHSUs work with health care professionals, parents, schools, community groups, and others to provide information on protecting children from environmental hazards.

The Children's Health Protection Advisory Committee, for which Ms. Martha Berger is the DFO, is a federal advisory committee comprised of 27 volunteers from communities, academia, industry, nongovernmental organizations, and state and local governments. The Committee includes experts in children's environmental health from clinical, research, regulatory, and advocacy groups and advises the EPA Administrator on regulations, policies, programs, communication, and specific issues related to the health of children. In 2009, EPA released the *Advice on Chemicals Management* and *Advice on Health Disparities* documents, and in 2010, the Agency released its *Advice on Draft School Siting Guidelines*.

Three workgroups focused on America's children and the environment, indoor environments, and prenatal exposures have been formed.

Ms. Loftness commented that she thought industry should have to prove that a chemical is safe. There must be research in green chemicals. Dr. Grevatt agreed; EPA recognizes this and is working on it. States are uneven in terms of the types and amount of information they gather. Another disproportionate area is pesticides. Tribal communities are impacted as much as any community and often they are impacted to a greater extent. These are all areas where NACEPT's input can help.

Dr. Mitchell said that Connecticut is examining lead as an indicator and chemical hazard. Most people know that lead is toxic, but are unaware that it is legal to use. He asked whether EPA is trying to reduce exposure to lead. Dr. Grevatt responded that the Consumer Product Safety Commission has conducted work to remove lead from toys, but lead remains a component of aviation fuels. He noted that cadmium in toys is a new concern. Dr. Mitchell asked whether there were any efforts to change the regulations so that the safe level of lead is zero. Dr. Grevatt responded that dose-response curves are being used to determine what level of lead is safe.

Ms. Victoria Robinson (EPA, OECA and DFO for NEJAC) described recommendations made by NEJAC during the past 14 years. NEJAC recently commented on *Plan EJ 2014*, and recommended that EPA: (1) add science as a cross-Agency focus in which ORD produces robust results by 2014 that will drive policy and implementation; (2) coordinate enforcement and compliance activities within EPA and with other efforts to reduce disproportionate impacts in individual communities selected for Agency attention through the use of the Environmental Justice Strategic Enforcement Assessment Tool and other tools; (3) develop consistent state guidance on incorporating EJ principals in permit actions; (4) target specific compliance strategies and enforcement actions to address problems that affect overburdened communities; (5) provide support for community-based organizations to participate in community or government-convened collaborative processes; and (6) develop an appropriate process to identify and, if necessary, eliminate or mitigate EJ considerations for all federal investments that affect communities suffering from disproportionate impacts.

NEJAC also made recent recommendations for permitting. EPA should follow the consensus recommendations of prior relevant NEJAC reports. EPA and the states/tribes should be more active and "vocal" in publicizing and enticing multiple stakeholder/public participation with state performance partnership agreements. The Agency should include appropriate EJ-oriented language in its Memoranda of Understanding with states/tribes and other federal agencies and maintain an easily accessible "living" document of all permit-related factors that contribute to EJ concerns. EPA also should encourage greater use of Supplemental Environmental Projects and allocate more time and attention to the many facets surrounding EJ and cumulative impacts in relation to permitting, regardless of which governmental entity has primacy. NEJAC strongly supports obtaining a local perspective.

The 2011 Work Plan includes a Gulf Coast Restoration Task Force Charge, permitting charge, and EJ in rulemaking. The Gulf Coast Restoration Task Force Charge considers how best to engage communities for input into decisions about Gulf Coast restoration plans, including potential permits. The permitting charge considers how EPA can reach out effectively to state, local, and tribal entities; industry interests; community and environmental groups; and other federal agencies to gather their comments and ideas and enlist their support. NEJAC will provide input into technical guidance that is under development in 2011.

Application of Science and Technology to Community Exposure and Risk Assessment
Andrew M. Geller, EPA, ORD, National Exposure Research Laboratory (NERL), Chief, Exposure Modeling Branch

Dr. Andrew Geller (EPA, ORD, NERL) provided information about the Community-Focused Exposure and Risk Screening Tool (C-FERST), a decision support tool for conducting cumulative human exposure

and risk screening assessments to build sustainable and healthy communities. There is a fact sheet about C-FERST, including contact information for its developers, on the EPA Web Site at http://www.epa.gov/heasd/c-ferst.

Decision support tools assist decision makers who implement environmental policies to make choices that result in sustainable communities. NERL has been collaborating closely with the Community Action for a Renewed Environment (CARE) Program for the past several years on developing this tool. CARE is a cross-EPA program that gives communities the power to prioritize environmental issues and the ability to assess their impact. C-FERST helps to establish baseline conditions and determine what has changed. A related tool, T (Tribal)-FERST, has been developed with tribal needs built into it. Dr. Geller pointed out that the tools can be applied to any community in the United States.

Five new case studies are being carried out during fiscal year 2011, and each of them provides access to new data. The goals of these pilots are to: (1) provide CARE Level 1 Partners with useful information to identify and prioritize issues; (2) enhance C-FERST usability for future use by project officers, CARE partners, and others; (3) provide transferable, generalizable methods to identify and prioritize issues; and (4) enhance cumulative exposure and risk science to inform decision-making. C-FERST will be applied via the CARE roadmap, and information for community issues of concern is gathered and discussed. A reference library of fact sheets then is built, and the tool can access factsheets about issues of concern. Dr. Geller used screenshots of each step of the Web-based tool to demonstrate how C-FERST works. Currently, the tool can generate environmental issue profiles for more than 40 environmental issues. Links to risks, sources, and risk reduction actions are provided. The tool is geographic information system (GIS)-based, so it is possible to choose an issue and see a map of the community. There also is an "EJ view" with census data that provides a greater breakdown. In terms of the decision-support matrix, the community data matrix takes the spectrum of indicators and helps assess the risk that they pose to the community. There are values for many of the demographic indicators. EPA is very excited about this kind of indicator matrix.

A NACEPT member asked whether C-FERST would be populated with health data. Dr. Geller responded that if these data could be obtained, they would be included.

Mr. Erichsen commented that the amount of resources needed is incredible. He mentioned fish advisories, which are issued at the state level. He asked how all of these data can be pulled together. Dr. Geller replied that there is a screening level analysis, but then it is possible to delve deeper. This issue was discussed with the tribes, many of which have the necessary information. The goal is to provide communities with the ability to upload local data and add it to the information already in the tool. There are good data available for health effects, but in terms of exposure, the problems have not been solved.

Overview of NACEPT Advice Letters on EPA Workforce Development
Robert L. Olson, NACEPT Workforce Issues Workgroup Co-Chair; and
Nanci E. Gelb, EPA, Principal Deputy Assistant Administrator, Office of Administration and Resources Management (OARM)

Mr. Olson stated that Mr. Billy Turner, Dr. Olufemi Osidele, and Mr. Wright also worked on the letter. The Workgroup narrowed down the charge and identified appropriate issues. The topics were broken down and explored by subteams. The topics included in the charge were: (1) scientific and technical competencies to meet tomorrow's challenges, (2) strategies to obtain and retain scientific and technical expertise, (3) strategies to attract and retain superior executive leadership talent, (4) leadership capabilities and culture for "One EPA," and (5) ensuring diversity.

The fundamental question posed at the beginning of the charge was:

Given the complexity of EPA's mission, the rapid pace of scientific and technological advances, and shifts in policy, science, and engineering, what are the scientific and technical competencies necessary to support EPA's mission today and 10 years from now so that EPA is prepared for tomorrow's challenges?

The recommendation included in the charge was that NACEPT should develop realistic future scenarios that capture evolving mission priorities and their drivers, then identify the scientific and technical competencies required to successfully accomplish developing mission areas. The Workgroup has developed 10 scenarios of evolving mission priorities and their drivers: (1) resource constricted, (2) big cross-cutting problems, (3) encouraging technological innovation, (4) climate becomes a top priority, (5) new EJ issues, (6) focus on nanotechnology, (7) getting in front of change, (8) sustainability emphasis, (9) sensor rollout, and (10) convergence of communication technologies.

At the previous meeting, Dr. Anastas discussed technology innovation. The OIG has initiated a study within the Agency on perceptions of nanotechnology, whether nanotechnology pollution poses any concerns, and whether new regulations are needed. The Agency, however, is not doing as much as it needs to do. Nanotechnology is just one area of technological change. An example of implications for needed Agency competencies is encouraging technological innovation.

EPA's current mission critical occupations (MCOs) related to science and technology include toxicologists, geneticists, ecologists, biologists, economists, chemists, physical scientists, health scientists, environmental and mechanical engineers, and attorneys. The Workgroup recommended adding the following MCOs: business and finance; social, behavioral, and decision sciences; environmental design; computer science and information technology; environmental foresight; partnership development; public outreach; transdisciplinary systems; and statistical analysis.

Dr. Chertow asked about the environmental foresight MCO. Mr. Olson replied that employees with environmental foresight expertise are needed to ensure that the Agency is looking ahead and anticipating emerging technologies. It includes environmental planning and scanning. Ms. Orosco noted that environmental foresight is related to getting in front of change. Planning and working with concrete information is important. She thought environmental foresight may bring in an organic component.

Ms. Loftness stated that training in each of these disciplines is essential and partnerships are integral.

Dr. Chertow recommended that a sentence or two be added to explain transdisciplinary systems. Mr. Olson explained that this includes people trained in one area and who have broad expertise to work with those trained in other areas and/or people who have been cross-trained in multiple areas.

There is changing emphasis within the existing MCOs; for example, subfields of economists to be considered for greater emphasis include behavioral and ecological economics. Ecological design and industrial ecology are two subfields within environmental and mechanical engineering. The Workgroup offered a number of recommendations for EPA's consideration that addressed: (1) a broad range of changes in circumstances during the next decade (i.e., 10 scenarios); (2) adding new occupations to EPA's list of MCOs or elevating them by other appropriate means (e.g., nine occupations); and (3) what subfields and specialties within the existing MCOs will become increasingly relevant during the next 10 years.

Ms. Nanci Gelb (EPA, OARM) thanked NACEPT for its efforts and said that the future is here. It already is necessary to transcend traditional roles and responsibilities and identify critical occupational experiences. In some areas, EPA is moving closer to what NACEPT is recommending. For example, the GIS field is different than it was a few years ago; geospatial data are being used to target responses. Although there is some flexibility, it is difficult to implement rules. The regulators are gathering some of the experiences of environmental economics but have not defined them as mission critical. She asked the

Workgroup to explain its recommendation that EPA hire employees with environmental foresight training. What are the necessary skill sets and responsibilities? It would be helpful to EPA if the Workgroup members could elaborate on their thinking with respect to this new MCO. She commented that NACEPT is on target regarding the skill sets needed by EPA. She said that she appreciated the efforts of the Workgroup and she looks forward to the next advice letters.

Mr. Learner mentioned that some of these are attributes rather than disciplines, or they are attributes that are becoming disciplines. In terms of environmental foresight, Dr. Johnson thought that EPA may need to grow them from within rather than hire outside experts trained in environmental foresight.

Ms. Loftness thought that the letter was very good. With regard to transdisciplinary design, there should be a subset of disciplines. Attributes are more nebulous than disciplines. EPA should have architects, including landscape architects and planners. People in the built environment need to be solicited. She agreed to send Mr. Olson some additional occupations for inclusion on the list.

Dr. Chertow did not think that there should be subsets, noting that a single-discipline job is rarely advertised. Alternatively, she suggested that a category might be needed (e.g., built environment). Jobs are changing very quickly, and a combination of growing and hiring is needed. Sometimes outside thinking from people who have been in other domains is needed.

Dr. Edith Parker (University of Iowa), NACEPT member, said that a major challenge is how to change universities so that they produce graduates with the skills and training that the market demands. How can transdisciplinary systems, for example, be injected into Science To Achieve Results grants?

Mr. Rivera congratulated the Workgroup on its efforts. He noted that there are many areas in which EPA is on the cutting edge, such as emergency preparedness and response. Homeland security could be one of the scenarios that need to be examined. EPA has a growing list of emergency response teams, but it will need more than emergency responders. People with different disciplines and skills are needed, such as civil affairs teams that have been in Iraq and Afghanistan to make up balanced, multidisciplinary teams. He commented that Dr. Geller's presentation about C-FERST was excellent but a bit dense. He suggested that CGI and graphics expertise be added to the list of MCOs because the Agency needs such expertise to provide clear, engaging products for users.

Ms. Bannerman asked how to discern the difference between a core competency and an entirely new discipline. Mr. Olson agreed that environmental foresight is hard to deal with and includes people who are up to date on emerging technologies. Ms. Bannerman pointed out that there are competencies within existing disciplines.

Ms. Kendall said that there appears to be some blurring of MCOs and mission critical core skills and competencies. Some items on the list are critical core skills/competencies. She noted that emergency response will be a much-needed MCO as more events occur in the future, but this is a skill EPA has developed as it has led responses.

Ms. Jennifer Nash (Northeastern University), NACEPT member, commented that she did not see global or international themes in the scenarios. She suggested that they be mentioned in the letter.

Dr. Olufemi Osidele (Southern Research Institute), NACEPT member, commented that advice on how EPA should go about gaining this expertise (by recruiting or growing it) might be addressed in a future advice letter.

Mr. Erichsen agreed with Ms. Kendall's point about distinguishing between disciplines and competencies.

Ms. Gelb explained that EPA has important responsibilities in homeland security; EPA is the lead agency for the water sector. Clean drinking water and sanitation in the event of an emergency are important and require a multidisciplinary response. She explained that the Agency organized its Homeland Security team to include the different skill sets, including risk communication experts and an interdisciplinary group that worked with other federal agencies. It is important that EPA have the capacity to respond to these events, and the teams are quite large.

Mr. Rivera commented that this segment of the Agency's mission will grow and EPA will have increased responsibilities.

Ms. Christine Costopoulos (Empire State Development), NACEPT member, said that in a bureaucracy, it is good to have people with needed skill sets and competencies, but it also is necessary to have people who will "shake things up" to affect a culture change in the Agency or it will just be business as usual. She was unsure whether the existing government structure allows for that.

Mr. Rivera commented that it seems that the NACEPT members have discussed the "what" but not the "how"; maybe that discussion is forthcoming.

Dr. Chertow wondered what needs to be done differently to recruit the younger generation. She would like to hear about EPA's experience with recruitment and analyze the Agency's data on retention. In May 2011, the President examined government hiring practices. Although private industry can hire within several weeks, the Federal Government takes an average of 80 days to hire an employee. The Administration's goal is to reduce that time to 68 days. She agreed with Mr. Rivera's comments and thought that more strategies could be implemented at EPA.

Mr. Learner noted that as the market gets more competitive, it will become increasingly difficult for EPA to obtain and retain executive talent. What should the Agency do now to address this problem? Where is EPA looking for new hires? How is EPA's culture changing to attract new talent?

Mr. Rivera explained that the diversity team of the Workforce Issues Workgroup has not met yet but there has been some initial discussion about the scope; the team thinks it is necessary to examine the whole pipeline. Ms. Gelb said that EPA has had a fair amount of success obtaining a diverse workforce at the entry level, in terms of short-term internships; however, diversity must be assured at every level.

Ms. Orosco stated that there is expertise within EPA and responsibilities that cannot be carried out by the private sector; therefore, the Agency should emphasize this and other benefits when marketing and conducting outreach to attract new talent.

Dr. Johnson reviewed the target dates for the subsequent workforce issues advice letters. The latest summary indicates that the diversity letter is due by February 15, 2011, and the others in March. He asked the members to examine the timeline and reminded them that NACEPT must review the letters before they are submitted to EPA. Mr. Joyce stated that, with respect to the schedule that was developed after the last meeting, it is important to address the charge quickly, but it is equally important to do a good and credible job on the advice letters.

Ms. Gelb thought that the issue of attracting and retaining a high-quality workforce should be the immediate focus of the Workgroup. She noted that quality of life issues are being examined and improvements are being made, such as flexible work places and a healthier balance between time at work and at home. NACEPT's help in rolling out these improvements in the next few months would be welcome. Mr. Joyce said that perhaps after Workgroup discussion, the schedule could be revisited during the next week.

Public Comments

There were no public comments.

Discussion and Approval of Initial NACEPT Advice Letter on EPA Workforce Planning: Scientific and Technical Competencies To Meet Tomorrow's Challenges

Dr. Johnson said that the next item of business was to review the advice letter, which was summarized in Mr. Olson's presentation. He noted that these letters should be complete as possible, but they will not be exhaustive. Some MCOs will be added to the list in the letter, some of which may be core competencies. Another issue that needs to be addressed is subdisciplines, and this may be accomplished by expanding some of the wording about the MCOs. Also, there is the idea of globalization and recognition that EPA is competing with other organizations across the globe to attract employees. He suggested that the letter be signed by Mr. Olson, and he thought all Workgroup members should be identified in the letter, including the members of the subgroups.

Ms. Loftness thought the recommendation to place "exemplified by" disciplinary titles is a good one; additional titles not identified by the Workgroup, such as facility manager, will be included. She suggested building on the global issue because the concept of "One World" is very important. International travel should be allowed as well.

Ms. Filippone commented that EPA has headquarters and regions, and each serve different purposes. More "people skills" are necessary in the regions, as they serve as ambassadors to the public. Employment needs in the regions should be discussed. Dr. Johnson thought this could be inserted into the final letter. He noted that the NACEPT members will have the opportunity to review the final letter to ensure that the points about the regions, competency versus disciplines, and globalization issues are included. Dr. Chertow added that the letter should note that there must be a culture change at EPA.

Dr. Johnson called for a motion to approve the advice letter with the suggested changes. Ms. Kendall moved that NACEPT approve the first letter with the discussed modifications that Dr. Johnson and Mr. Olson will make based on the recommendations of the Council members. The motion was seconded and unanimously approved.

Workforce Issues and Vulnerable Populations Workgroup Concurrent Sessions

Workforce Issues Workgroup Session

The Workforce Issues Workgroup session included nine NACEPT members: Ms. Erica Bannerman, Dr. Marian Chertow, Ms. Christine Costopoulos, Ms. Sara Kendall, Mr. Howard Learner, Mr. Robert Olson, Dr. Olufemi Osidele, Mr. Roger Rivera, and Mr. Kobi Wright.

The Workforce Issues Workgroup had formed two teams—one to address retention and one to address diversity. Mr. Rivera stated that NACEPT is expecting a draft of the diversity letter for review by mid-March 2011. A draft of the retention letter is expected in mid-April 2011.

Mr. Rivera thought the Workgroup should look at student programs, such as the Student Temporary Employment Program (STEP) and the Student Career Experience Program (SCEP), in light of Questions 2, 3, 4, and 5, particularly with respect to diversity. Diversity, like science, is a cross-cutting issue but it is not being dealt with at EPA in a cross-cutting way. He noted that although Question 5 deals directly with diversity, there is an element of diversity in the other questions as well. There also are diversity issues associated with Question 1 (scientific and technical competencies), which was addressed by the first letter. Where the Agency goes to recruit new employees is critical to ensuring diversity. If EPA is not

recruiting from minority universities, such as Howard University, then the Agency likely will not access the best minority candidates.

Mr. Wright suggested that the members of the team working on diversity could be divided up among the other teams or every team will have to address diversity. Ms. Kendall pointed out that the letter addressing Question 1 has been drafted so the members of the diversity team (Question 5) could be allocated to the groups addressing Questions 2, 3, and 4.

Mr. Rivera stressed the need to address diversity as a separate issue so he did not think it was feasible to eliminate the diversity team by dividing the members among the other teams. Dr. Chertow pointed out that Ms. Gelb redefined the diversity issue for this Workgroup when she stated that EPA has been struggling with retaining a diverse workforce, but recruiting had not been a problem. Mr. Rivera responded that he did not think that EPA was doing a good job of recruiting young minorities to the Agency. Dr. Chertow asked what percentage of EPA's new hires is African American. What percentage is Latino? Ms. Bannerman replied that those data are available on the EPA Web Site; the Workgroup just needs to go through them.

Ms. Kendall suggested taking another look at the original charge. How does the Agency retain a diverse workforce? How does EPA define, track, and measure diversity? There are many components to put together under the diversity charge question; this is an enormous challenge. She agreed that diversity is a clear component of the recruiting strategy. It also is a component of leadership development.

Dr. Osidele thought that the diversity team should remain intact. Perhaps that team could help the other groups address the diversity issue through teleconferences. The other teams could use the findings and recommendations of the diversity team when addressing the other questions.

Ms. Kendall thought that it would be better for the diversity team to provide input for the other questions rather than divide the members of that team among those addressing Questions 2, 3, and 4. She suggested developing a work plan, spending a few weeks gathering and reviewing information, and then scheduling a conference call for everyone to come together to report on what had been done and provide input on all the questions. This approach will bring the members' different perspectives to bear on each of the questions. The teams will do the detailed, more comprehensive work and then the Workgroup will come together at several times during the process through conference calls.

Ms. Bannerman expressed her concern about compartmentalizing the Workgroup's advice into separate letters. If the Workgroup takes that approach, the advice will go in an isolated fashion to those who need it. Dr. Chertow asked if each team should develop an outline for its assigned letter and then distribute the outlines to the entire Workgroup. Mr. Rivera pointed out that the suggested approach means that the diversity team members will need to be involved in more conversations and will have to do more work. Mr. Wright agreed with Ms. Kendall's suggestion of allowing each team to address its assigned question and then come together as a Workgroup to discuss progress and provide input.

Ms. Bannerman asked about integrating the individual letters that will be prepared and submitted to EPA. Mr. Rivera thought it was premature to be concerned about integration. Ms. Kendall said that she did not see any problem with being repetitive on the issue of diversity in the different letters. Ms. Bannerman thought that would be inefficient, but she agreed that diversity needed to be addressed in all of the questions.

Mr. Rivera noted that there is a challenge in bringing diversity to all levels—entry, mid-level management, and Senior Executive Service (SES). There is redundancy and the issues and solutions are broadly the same for these different levels. Ms. Costopoulos suggested that diversity may be an umbrella. Perhaps the Workgroup could combine the responses to some of the questions into one letter. She noted

that the question dealing with One EPA culture was different from the letters addressing attracting and retaining talent. She cautioned against dividing the Workgroup's advice into separate letters.

Dr. Osidele did not think the letters needed to be repetitive. He was not sure how many letters should be prepared but he thought there would be at least two more from the Workgroup. Ms. Costopoulos thought the responses to Questions 2, 3, and 4 could be combined into one letter. The diversity issues also could be addressed in that letter. The question concerning the One EPA culture, however, should be addressed separately.

Mr. Learner noted that the first paragraph of the letter includes the charge to NACEPT on workforce planning. The Workgroup divided the charge into five topics because no one was willing or able to lead the response for the entire charge. Perhaps it makes sense to pull the responses to Questions 2, 3, and 4 together as sections of a single letter and make the advice more coherent. Dr. Chertow mentioned that the deadline for the diversity letter preceded the deadlines for the other topics. Mr. Learner said that he was confident that the Workgroup could negotiate a later deadline with EPA. He suggested that the Workgroup prepare by mid-April one coherent letter that addresses the remaining topics. He agreed to ask Mr. Joyce to renegotiate the deadline with Ms. Gelb. Ms. Bannerman thought this approach would be much more efficient. Mr. Rivera agreed, noting that diversity is cross-cutting and should be dealt with holistically. He mentioned that there is a substantial amount of data (numbers and percentages) on the EPA workforce that the Workgroup needs to plow through and analyze. This analysis will help organize the work. He noted that EPA has laboratories across the United States and that the science/research workforce is less diverse than the overall workforce. He thought that it might be helpful for the scientists on the Workgroup to take a look at this issue; he is not a scientist so he can offer more expertise on recruiting and retention at the entry and mid-management levels.

Mr. Wright asked about the next steps. Have the Workgroup members agreed to prepare one coherent letter that addresses the remaining questions? When there appeared to be consensus with this approach, Mr. Learner suggested that the Workgroup develop an outline for the letter. Ms. Kendall agreed, noting that the Workgroup should identify the main topics so that the teams can do the data analysis and draft the sections.

Ms. Bannerman said that she had looked at a number of the resources posted on the NACEPT Web Site and several of them will be valuable for the analysis. The ones she thought might be most helpful to the Workgroup are: Strategic Workforce Plan 2006, FY 2010 Human Capital Management Report, and the OIG Audit Report, "EPA Needs to Strengthen Internal Controls for Determining Workforce Level," June 29, 2010. The Human Capital Management Report, in particular, has data that the Workgroup will need to support its findings and recommendations. Mr. Rivera was concerned that some of the data were several years old. Ms. Jones-Jackson commented that Mr. DeLeon's office is working on a document that has current data; this document is expected to be released by the end of January. She will request that the document be provided to the Workgroup as soon as possible.

Ms. Costopoulos asked whether the Workgroup was supposed to develop targets for EPA to meet or examine EPA's process and suggest ways that the Agency can attract and retain a more diverse workforce. Mr. Rivera responded that it definitely was the latter. EPA has identified its own targets for diversity and the Agency is asking NACEPT to help it think through how best to reach these goals. Often the best answer is a common sense solution. It may be as simple as changing or broadening the sources from which the Agency seeks candidates.

Ms. Bannerman asked how the Agency would measure its performance with respect to diversity if there is no specified goal. Mr. Rivera replied that in the absence of a specific goal, the Agency may want to reflect the civilian workforce. In response to Ms. Costopoulos' question, Mr. Wright cautioned against recommending a specific goal or target for diversity in the letter to EPA. As the interim director of EPA's

Office of Civil Rights, Mr. Rafael DeLeon's input on this subject would be invaluable. He could provide input regarding EPA's diversity goals.

Ms. Kendall commented that the combined letter is actually about **how** EPA should recruit and retain a diverse workforce. She suggested that the Workgroup go back and review the charge. She then began developing an outline for the letter on the flipchart. This outline is presented in Exhibit 1.

Mr. Rivera said he liked the outline. He was confident that Administrator Jackson was looking for advice that goes beyond the ordinary. The Agency has been trying to increase diversity for a number of years and has been unsuccessful; in fact, there has been some regression. Mr. Learner reminded the Workgroup that Ms. Gelb thought the Agency was quite successful in bringing in a diverse group of interns/entry level employees, but that retaining a diverse workforce was the real problem. Mr. Rivera responded that he did not agree with Ms. Gelb's comment that the Agency is doing a good job of recruiting minorities at the entry level.

Mr. Rivera stated that EPA and other environmental agencies (e.g., Fish and Wildlife and Park Service) have poor records of promoting minorities to management positions, especially senior positions. This relates to Section III of the outline, which addresses the One EPA culture because this is a cultural problem.

Ms. Bannerman commented that the data on the EPA workforce are available in the resources posted on the Web site. She recalled that there are about 3,000 African American workers employed by EPA and only 5% are SES. The Agency employs even fewer Hispanics and Native Americans. In response to a comment about the SES percentage, she acknowledged that the SES pool is a small component of the EPA workforce. The Workgroup needs to use the data as an indicator and then make recommendations on how EPA can improve the diversity of its workforce.

Ms. Claire Milam (EPA, OARM), who had been involved in preparing many of the resources posted on the Web site, said that EPA would like its workforce to reflect the face of America and not just the civilian workforce. She commented that most of the African Americans in the EPA workforce are in administration or technical support positions, but not the science positions or the senior levels. Are there an adequate number of African American scientists available or does the Agency need to do more with universities to encourage African Americans to pursue science degrees?

Dr. Chertow responded that there are minority students at Ivy League schools such as Yale, MIT, and Stanford; however, there currently is not even one African American student pursuing a Ph.D. in environmental science at Yale University. The diversity in Ivy League universities is very far from reflecting the face of America. The EPA Administrator cannot fix this problem. Universities need to recruit minorities and when they are successful, it will change the diversity of the workforce. Mr. Rivera commented that minorities are insufficiently represented at Ivy League schools and when EPA goes to those schools and tries to recruit the few minorities available, the Agency has difficulty competing with what industry can offer these minority students.

Ms. Milam stated that EPA has made many efforts to reach out to minority schools (Native American and Hispanic universities as well as Historically Black Colleges and Universities). The Agency also has initiated outreach programs to minority high school students to interest them in pursuing environmental science. Despite these efforts, the Agency has been less than successful in recruiting and retaining minority employees. Ms. Kendall said that Weyerhaeuser is a lot like EPA; the company has a great diversity program but its workforce is still not as diverse as the company would like. If EPA wants to

Exhibit 1. Outline for Second Advice Letter

Recruiting/Retention/One EPA/Diversity Strategies (The How)
Chair: Howard Learner (will compile drafts into one letter)

I. Recruiting Science and Technical Talent
(Lead Workgroup Members: Marian Chertow and Erica Bannerman)

A. Entry level
1. Mission Critical Occupations (MCOs)
2. Mission Critical Competencies (MCCs)
3. Diversity
4. Headquarters/Regions
5. Outreach
6. Hiring practices
7. EPA mission relevance
8. Barriers

B. Mid level
1. MCOs
2. MCCs
3. Diversity
4. Headquarters/Regions
5. Inside/outside hires
6. Outreach
7. Hiring practices
8. EPA mission relevance
9. Barriers

C. SES level
1. MCOs
2. MCCs
3. Diversity
4. Headquarters/Regions
5. Inside/outside hires
6. Outreach
7. Hiring practices
8. EPA mission relevance
9. Barriers

II. Retaining and Developing MCO and Diverse Talent and Leaders
(Lead Workgroup Member: Howard Learner)

A. Leadership development
1. Quality of life
2. Job satisfaction
3. Workplace of choice

B. Retaining diverse talent in MCO/MCC
1. Quality of life
2. Job satisfaction
3. Workplace of choice

C. Growing diverse leadership pools and ranks
1. Quality of life
2. Job satisfaction
3. Workplace of choice

III. Culture Change to One EPA
(Lead Workgroup Member: Christine Costopoulos)

A. Silo busting
B. Headquarters/Regions
C. Barriers to diversity progress

IV. Diversity in EPA
(Lead Workgroup Member: Roger Rivera)

A. Define
B. Tracking
C. Advocacy for diversity

increase diversity, the senior managers need to support diversity and include diversity goals in the managers' performance criteria. Ms. Milam responded that EPA has incorporated diversity goals in performance criteria.

Mr. Wright asked if the lack of diversity stems from an insufficient pool of candidates available or failure to recruit from an adequate number of appropriate pools (those with diverse candidates). He mentioned that he had never thought of EPA as having a diverse workforce so the Agency will have to market itself as an appropriate workplace for people of color.

Ms. Milam responded that Administrator Jackson would value advice on both short- and long-term means of improving diversity at the Agency. The average age of the EPA workforce is increasing and many SES staff members are eligible to retire. Where does EPA find a diverse population of qualified candidates to step in to fill these senior positions, bringing with them new ideas and innovative suggestions? She stated that approximately 80 percent of the SES positions are filled from within the Agency. EPA needs to look outside of itself to increase diversity, but where should the Agency go to find qualified talent?

Mr. Rivera commented that outreach to pools of diverse candidates must be part of the Agency's strategy for recruitment. Ms. Bannerman thought it would be helpful to describe the benefits of diversity in the letter.

Mr. Learner asked if the outline presented on the flipchart was responsive to the charge. Ms. Milam said that she would add advocacy for diversity within EPA and building support for it within the Agency. Mr. Learner agreed that advocacy should be addressed in the letter. He noted that the charge encompasses more than diversity and the letter has to address all of the issues. For example, how does the Agency develop leaders? This is not limited to diversity; it focuses on how EPA identifies talented people and develops them into leaders. What should the Agency do to prepare employees for leadership? What should EPA do to keep these talented employees at the Agency? What can EPA do to bring in new talent to the Agency?

Ms. Bannerman asked how diversity would be addressed in the proposed framework. Ms. Kendall explained that the first section would address recruiting and within that section, the letter would discuss recruiting at the entry, mid, and SES levels. At each of these levels, the letter would address MCOs, MCCs, diversity, headquarters/regional issues, hiring practices, outreach, and other elements.

Mr. Rivera said that he liked the framework but he thought that other issues might unfold after the teams gather and analyze information and share that with the Workgroup. Dr. Chertow thought there would be a data gathering phase, an analysis phase, and an integration phase. Ms. Kendall asked if any additional topics should be added to the outline at this time. Mr. Wright thought that outreach should be added, and Ms. Kendall replied that it already was included on the list. Mr. Rivera commented that the Workgroup will need to look at EPA's existing diversity programs to determine why they were not successful. There may be other programs beyond the EPA diversity programs that may be helping or hurting diversity. The Workgroup should look at those programs too. Dr. Chertow expressed some concern about the time required to examine those programs and the level of detail of the review. She noted that the first advice letter was at a high level; EPA can hire contractors to do a more detailed assessment of existing diversity programs. Dr. Osidele noted that EPA did not provide any feedback to NACEPT about the Workgroup looking at some of the issues in the charge and leaving others to be addressed by a contractor. Ms. Milam responded that EPA understands and agrees that the Workgroup had to take steps to narrow the scope of its charge. She did not know, however, whether EPA would hire a contractor to examine those elements not being addressed by NACEPT.

Mr. Rivera said he would like to look at specific programs for diversity; Ms. Kendall asked if it would be possible for EPA to provide the Workgroup a summary of this information. Ms. Milam replied that the

Agency has strategies for some of the elements, such as recruitment. EPA does not have a retention plan because that has not been a problem in general; she did acknowledge, however, that the Agency has a problem with retaining a diverse workforce. Ms. Milam mentioned that SCEP and STEP numbers are not reflected in the data provided by EPA. She did not know what percentage of those individuals is hired by the Agency. Dr. Osidele suggested looking at the effectiveness of EPA's programs. Mr. Rivera commented that every agency has a Hispanic Employment Program (HEMP), and they have been ineffective. They also have programs for employing other minorities as well. He thought the Workgroup should look at why these programs have failed to increase diversity.

Ms. Bannerman commented that the Workgroup is assuming that the supply is adequate to meet the demand. The Workgroup needs statistics on the applicant pool to determine if there is an adequate number of qualified candidates. Mr. Rivera noted that when minorities are hired, they are not treated well and they are not promoted. Dr. Chertow said there are figures available on the applicant pool and she knows how to find them. Ms. Kendall was concerned that there may not be enough time to do a thorough assessment of the pool, and the Workgroup may need to use anecdotal evidence to support its findings. Mr. Wright noted that the team working on the first advice letter did not look at a large amount of numerical data to develop its recommendations. Many of those findings and recommendations were based on the experiences and knowledge of the team members. Dr. Osidele noted that the team members spoke with others who had experience on the subject and Bob Olson gathered input from the Office of the Chief Financial Officer. Ms. Bannerman agreed that time was limited but she wanted to go through the available data. Dr. Chertow mentioned that there is considerable information on the candidate pool that was developed when non-governmental organizations (NGOs) were accused of failing to hire minorities.

Ms. Milam mentioned that EPA would welcome input on best practices for measuring the effectiveness of its programs. She thought this would be more helpful than an analysis of existing diversity programs. What indicators should be used to measure success? What has the Agency failed to consider? Mr. Rivera agreed, noting that these programs already have been analyzed by others. He would like to see the data EPA already is collecting.

Ms. Kendall asked if there are diversity networks in EPA. Ms. Jones-Jackson responded that such programs would be managed by the Office of Civil Rights. Rafael DeLeon could address that issue. Ms. Kendall asked if there was a summary of this information available. Ms. Jones-Jackson said she would ask Mr. DeLeon what is available and get back to the Workgroup. Ms. Milam said that she could obtain retention data from a colleague and provide that information to the Workgroup.

Ms. Kendall noted that it is important to know what EPA has done so that the Workgroup can avoid making suggestions that already have been tried by the Agency. It appears that EPA management is committed to diversity but the Agency is failing to achieve it. Understanding the root cause of this failure is a different charge than what is outlined in Exhibit 1. The proposed outline addresses some "hows" of what works and what does not. The "what went wrong" issue is a different product than the "how to" framework the Workgroup has prepared. Mr. Rivera suggested that the letter can point to certain programs as examples. He agreed that the Workgroup should not assess what went wrong with the various programs. Mr. Wright concurred that the focus should not be on evaluating existing programs; it is clear that they are not working. The Workgroup needs to look at existing programs, however, to help identify new approaches that will be more effective.

Given that there was general agreement on the outline, Ms. Kendall suggested that the Workgroup discuss what information needed to be gathered, reviewed, and analyzed, and determine who will work on the different sections. She did not think it was necessary for every Workgroup member to read each of the resources provided by EPA. Mr. Rivera pointed out that the EPA staff is another important resource for the Workgroup. He mentioned that Rafael DeLeon and Raul Soto would be excellent resources.

Dr. Chertow and Ms. Kendall volunteered to work on the first section of the letter (i.e., Recruiting Science and Technical Talent). The assignments for the other sections would be discussed in the morning session.

Vulnerable Populations Workgroup Session

The Vulnerable Populations Workgroup session included nine NACEPT members: Dr. Benedict, Ms. O'Donnell, Ms. Loftness, Dr. Mitchell, Dr. Dysart, Ms. Orosco, Dr. Parker, Mr. Erichsen, and Ms. Filippone.

Ms. Orosco thanked everyone for their hard work, and noted that much information already has been compiled. She suggested that rather than going through entire case studies, the Workgroup members offer a brief description of the work they have conducted.

Dr. Mitchell submitted four case studies to illustrate different aspects of EJ; he thought it might be helpful to summarize the case studies and determine how to prioritize them. Also, a report on the definition of vulnerable populations would be useful. Ms. Robinson will be present during Friday's session to discuss the issues being addressed by NEJAC and how important the technologies under discussion might be in helping to address them.

Ms. O'Donnell suggested that key points from the case studies be recorded, such as the issue, the geography, and the technology. The Workgroup members agreed. Dr. Mitchell suggested that a few case studies be chosen as the main focus of the report, and it would be useful to discuss how they would be selected. Ms. O'Donnell recommended that the Workgroup ask Dr. Geller about the work EPA already is conducting in the area of vulnerable populations so that the Workgroup can build on it with information from the case studies and then generate some recommendations.

Ms. Orosco agreed with this approach because it will provide a useful framework for the report audience. Perhaps an introductory narrative about current conditions in EJ and vulnerable populations should be included.

Dr. Geller asked if the group was briefed on what EPA's EJ showcase program has produced. Ms. O'Donnell responded that it was, but only with respect to the use of technology to identify, monitor, communicate, and solve problems affecting EJ and vulnerable populations. She added that the report went to the Administrator without acknowledging what EPA has already accomplished.

Dr. Benedict commented that this would be a gap analysis in which the Vulnerable Populations Workgroup might have overall recommendations on issues that should be pursued, and how the existing capabilities and activities fit into that.

Mr. Joyce noted that EPA has held several meetings and calls with Dr. Hauchman, who had said that the purpose of the recommendations is to guide EPA. It would be most useful for the Workgroup to identify types, classes, and categories of technologies that are needed to address these intractable environmental problems. He mentioned that Dr. Mitchell had sent an e-mail about someone in the local community with serious air quality issues. A hand-held volatile organic compound (VOC) sensor was used in the community, but it only confirmed that VOCs were present. If the device, however, differentiated the toxics and listed their concentrations, that would help ORD in identifying needs and prioritizing research for funding. Dr. Hauchman agreed that this information would be helpful.

Dr. Mitchell stated that because the Workgroup members have no way of knowing all the technology that exists, the Workgroup's approach should begin with the issues and then identify the gaps. If appropriate technology exists, then the Workgroup will recommend that it be made widely available.

Ms. Nash asked about the Workgroup's deliverable and timeframe for completing it. Dr. Mitchell confirmed that the deliverable would include information on the type of technology that would be useful to vulnerable populations to address their environmental issues along with case studies that would illustrate the need for certain technologies. Mr. Joyce added that the format of the deliverable would be a report containing a number of well-documented case studies as its core, with introductory material discussing the charge, issues, definitions of vulnerable populations and how they are used, and a conclusion with recommendations to the Administrator and next steps that would tie the report together. A grid to provide a visual framework could be included. The report should be completed by December 2011, at the latest. The members will draft the rough text and will identify graphics to include in the report, then SCG, as OFACMO's support contractor, will edit and integrate the text and complete the graphic design. The Workgroup will be involved throughout the process in reviewing and commenting on various drafts as they become available. Ms. Orosco thought this sounded like a good approach because the Workgroup members can divide up the work according to their strengths, and have a draft ready by summer.

Ms. Loftness noted that the Workforce Issues Workgroup had drafted a four-page letter that succinctly presented key issues. The Y axis of this Workgroup's matrix (Exhibit 4) describes key environmental issues that affect vulnerable populations, and these could be described, with the case studies used as illustrations rather than the basis of the report. Mr. Joyce commented that the intent was to focus on the case studies because they are known examples demonstrating that what has been tried to date has failed. The modeling, monitoring, or remediation technologies that are needed then can be discussed, and this discussion will inform the recommendations. Ms. Loftness asked about the goal. Is it the response to the specific case study, or is it the generic problem statement that the case study illustrates? Mr. Joyce responded that by using the different case studies, the Workgroup will be able to develop a series of recommendations on needed technologies that would be applicable in various situations. Ms. Loftness commented that there were several case studies that dealt with water and contamination of water, which is a very important issue. It may be, however, that there are too many case studies on the contamination of water, and none on the absence of water. She suggested that the case studies generate the agendas. Ms. Orosco proposed that the case studies be presented at this meeting and the matrices be completed so that they can be used in the report.

Dr. Mitchell added that many of the EJ problems will not be solved by technology; many are policy problems. All of the case studies will not necessarily address the primary EJ issues that can be solved by technology. Gaps must be determined, and other case studies may be sought. The prioritization process will take into consideration whether the problem could be helped substantially by technology. Mr. Erichsen agreed with the need to broaden horizons in terms of looking into what technologies are out there. Additionally, all of the emphasis has been on assessment and treatment technologies, and there is the whole question of outreach, public involvement, and understanding of the issues. In some communities, the concept of EJ has not yet reached ground level. Dr. Mitchell agreed that this point should be addressed.

Dr. Geller asked the Workgroup members, as they considered these technologies, to keep in mind that there are multiple phases. As Ms. Filippone noted earlier, many communities know that they have a problem but need help finding the solution. Technologies exist for remediation, but there also are technologies for issue identification and communication as well as issue prioritization. Referring to the Hartford incinerator study that she had read, Ms. Filippone noted that Essex County, New Jersey, now has the same problems. EPA was asked what it was doing about these old incinerators. Each of these case studies must be discussed to determine how they are applicable universally. In discussion of the case study, other related cases could be mentioned. Ms. Loftness stated that Sweden is converting trash to energy with microscopic quantities of pollutant discharge. The technology solutions for these issues should be discussed.

Ms. O'Donnell said that it seemed as if the Workgroup would start with the case studies, but also examine the backdrop of each one. A summary of the technologies EPA already is using should be included, as should a discussion of what is known about the major issues.

Ms. Filippone commented that in certain urban areas, EPA is doing a great deal of work, but the public and decision makers are not happy with what is being done. Ms. O'Donnell responded that by stating what EPA was doing, the Workgroup would not be making value judgments on the Agency's work. Dr. Mitchell noted that the real question is whether EPA is addressing the community's needs. That is the point of considering the needs first. Ms. O'Donnell asked ORD staff to summarize what EPA has been doing and where the Agency is now so that the context is presented in the report. Ms. Orosco agreed with the idea, and volunteered to work with someone to create a paragraph on historical and current perspectives. Dr. Geller cautioned that ORD is not the only EPA office working on EJ; the charge was presented to the entire Agency, and all offices have taken some actions. Ms. Loftness explained that the table from NACEPT's last face-to-face meeting presented seven large areas of responsibility. She assumed the presentation Dr. Geller had made on CARE was about an assessment and analysis technique, not new sensor technologies. Dr. Geller responded that CARE level 2 consisted of solution technologies and prevention. Noting the interest in EPA providing the Workgroup a list of technologies, Dr. Hauchman commented that it may be problematic to prepare the list and it might not be particularly helpful. What might be helpful is for the Workgroup to provide EPA with a list of technology challenges and needs, such as the need for a low-cost, easy-to-use technology. Mr. Joyce added that EPA's intent was that NACEPT's recommendations to the Administrator and the Agency would have greater impact if this Workgroup identifies technologies that are needed. At some point, developers and venture capitalists will get involved, but they need to know the need before they can identify the market.

Dr. Benedict noted that he had not been part of the development of the initial matrix, but the gap in the columns is "data and information access." It is more than the sensor management technologies and metrics, but the ability to provide access to the same data that are being used by EPA in assessing the success of programs. Ms. Loftness commented that three levels of technology were discussed, but the categories could be described better.

Ms. Orosco asked if land use could be separated from transportation because they are two separate issues. Ms. Filippone noted that technology was being discussed, but Dr. Mitchell had mentioned political and social problems, and these also must be discussed. Dr. Mitchell explained that policy and other EJ issues are the purview of NEJAC. Ms. Filippone added that there are egregious environmental problems and no technology that easily addresses many of them. Ms. Loftness commented that she had wanted to add policy to one of the matrix columns because it may be the best "technology" to solve some problems. Dr. Mitchell added that the question was about NACEPT's charge, which is not to examine EJ policy. He believed that NACEPT was asked to address technology because it is a unique aspect of the problem. Ms. Filippone noted that some effective communications technology could address these cases.

Dr. Mitchell described the case study on the Hartford incinerator. Hartford, Connecticut, has the fifth largest trash incinerator in the country. It accepts and incinerates trash from 70 towns. Hartford is almost 80 percent African American and Latino, and one of the lowest income communities in the country. When trash is burned, the toxics are not monitored because it is thought that incineration is the best technology for trash disposal because it creates energy. He noted that there is no good technology for waste disposal because if toxics are burned, they are released into the air, and can cause disease. The incinerator is the source of the highest level of mercury in New England. The other technology of concern in this case is that for the measurement and monitoring of toxics. Technology is needed for real-time monitoring and these results need to be made available to the community real time. Mr. Joyce asked at what point the Workgroup was going to start identifying needed technology, such as continuous emissions monitors. How will the Workgroup capture the types of technologies that these case studies require? Ms. Loftness said that words need to be added next to the bullet. Once there is a bullet under sensor, clarification is needed. Dr. Mitchell noted that sensors are available now, with continuous

emissions monitoring of temperature, oxygen utilization, and perhaps nitrogen oxides, but that does not address the issue of toxics. Ms. Filippone asked whether there was a need to determine if the incinerator needed to be upgraded. EPA should consider this possibility in all locations. Dr. Mitchell responded that EPA monitors the emissions per minute.

Ms. Filippone described the case study on the Passaic River project. The river is polluted with dioxins and legacy pollutants that date back to the 19th century. The EPA Administrator is aware of this problem. There is a federal project on urban rivers for which EPA is the lead, the USACE is a partner, as is the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Fish and Wildlife Service (USFWS). The State of New Jersey, four counties, NGOs, and the municipalities also are involved. EPA has been studying and modeling this project since 2001, and there have been continuous delays. In the 1990s, New Jersey received money and sent out requests for proposals to determine if a process could be developed so that the sediments could be removed and treated. One process involves washing, and another involves a thermal chemical destruction process. EPA has discussed a removal process in which it would dredge and dispose of the sediments, or another process where they are placed in a hole in the bay and capped. The chemical thermal process should be examined. A group called AAB from Switzerland, which develops mechanisms that monitor emissions, has been brought in. People would have to be trained to run this system, but it would be applicable to incinerators and anything else that could release air emissions. Issues related to dredging and dewatering also were considered. There can be a great deal of spillover and resuspension of sediments and contaminants. In Belgium, a company has developed not only hydraulic dredging with sensors to identify bulky materials, but also a system that helps in the dewatering of the sediments. Some of these technologies will be used at EPA's Fox River project, and should be imported for use in the Passaic River. Ms. Loftness asked if new pollutants were being dumped into the river. Ms. Filippone replied that additional pollution was coming from upstream, but there were no longer any point sources dumping into the river. This is a tidal river, so the dioxin is raised through the sediment and is part of the tidal mixing. Moving the waste would cost an estimated $9 billion, whereas using the new technologies would cost $1.2 billion. Cost is a major element as far as decision makers are concerned.

Mr. Joyce added that he liked the way the case study had been characterized, but the two technological solutions already are in existence. Ms. Loftness commented that technologies developed abroad often are not used domestically. Dr. Mitchell stated that these technologies were being used domestically; there is a thermal facility in Waterbury, Connecticut where they are being used. Mr. Joyce explained that what would be helpful to ORD is the next generation of monitoring technologies to map the different pollutants and toxins. Ms. Loftness suggested that solution technologies are underrated; if a technology has been used successfully in other countries, then it is time for the United States to use them. Mr. Joyce noted that if these technologies already have been developed, what is needed is a better technology for use in the United States. The way to characterize this problem for ORD might be to say that a portable cost-efficient de-watering facility for contaminated sediments is needed.

Dr. Geller stated that in this case study, one of the drivers is that there was a subsistence population eating fish out of the river. Part of the science that is needed is an ecoservices evaluation, that is, an evaluation of the restored water course. What is the value beyond reducing exposure? Is there additional valuation that can be demonstrated? Ms. Filippone thought it would be appropriate for the USFWS or NOAA to undertake that study. Natural resource damage stewards are supposed to determine the natural resource damage value of this river system, and they cannot settle on a number because the contamination has existed for such a long time. The fish that are in the river, however, have dioxins in their fatty tissue. There is an ongoing program that posts warnings about eating the fish in English, Spanish, Portuguese, and Chinese, but people still consume the fish. There are many different approaches to do it, but the river has to be cleaned up.

Ms. Orosco noted several issues in her case study on federal Indian reservations: pathways unique to indigenous communities, background, disparities, and indoor air quality issues because of historical lack

of housing. Ms. Loftness asked if the problem with indoor air was that there were no adequate sensors, assessment, or solution sets. Ms. Orosco answered that all three were problems. It already is known that there is black mold in almost every HUD home on tribal lands, so additional assessments and analysis may not be the solution. Perhaps the best place to start is with solution-based actions. Construction materials are a problem. Mr. Joyce asked how ORD could help in this situation. Ms. Loftness stated that the major issue with black mold is that the solution set to eliminate the triggers is not known. Ms. Orosco explained that in the tribes' traditional way of living, the materials used have a natural resistance to mold, mildew, and pests. Because the Bureau of Indian Affairs forced tribes to live in modern homes, however, the natural construction methods that kept people healthy had to be abandoned. In addition, pesticides and herbicides applied to public lands are ingested when tribal cultures hunt or conduct traditional ceremonies. Integrated pest management and similar measures should be applied on federal lands.

Dr. Ben Dysart (Dysart and Associates, Inc.), NACEPT member, described a case study in the chemical corridor of Louisiana. He noted that companies, regulators, and elected officials often are not aware of a problem. In one case, first responders missed the effect of the chlorine explosion, so the reality of what happened was lost, and the population suffered. Monitoring and reporting is needed to make situations transparent to all parties. This involves sensors, networks, and what should be done with information so that the solution is affordable and properly deployed. Dr. Mitchell confirmed that this case concerned the release of petrochemicals. Ms. O'Donnell asked if any solution technology was available. Dr. Dysart responded that the solution could include sensors and the way they are deployed. Dr. Mitchell added that the technology must be portable, and community involvement is needed.

Dr. Mitchell described "Rubbertown" in Louisville, Kentucky, which has 11 chemical plants in a 2-mile stretch of the Ohio River across the street from an African American community and poor white communities. This case deals primarily with air issues. These plants have many spills and upsets, and there is a significant release approximately once every 2 weeks. There are monitors at schools 1 mile away, but readings are averaged over 24 hours. Monitors are needed that will measure at low levels and for short periods of time at a reasonable cost, and a means for rapidly notifying the community is needed so that when there are accidents, people are notified in a timely manner. Ms. Loftness commented that revised metrics are needed because sensors already are present. Measurements could be taken from the local children as well. She noted that every case study triggers a different set of technologies, so the more case studies that can be prepared, the more technologies the Workgroup will be able to address.

The meeting was recessed following the concurrent sessions.

FRIDAY, JANUARY 21, 2011

Workforce Issues and Vulnerable Populations Workgroup Concurrent Sessions (continued)

Workforce Issues Workgroup Session

Ms. Kendall reported that she had filled in some details on the original outline (those details are reflected in Exhibit 1). She suggested devoting this session to identifying the resources to review and developing a timeline for the second advice letter. The timeline that was developed is presented in Exhibit 2.

Ms. Jones-Jackson asked about the best time of day for the EPA briefings and Ms. Kendall requested that they be held after 11:00 a.m. EST.

Ms. Milam asked if the second advice letter would address the One EPA culture component of the charge. Ms. Kendall responded that there had been limited discussion of this issue but it could be included in the letter and it is in the current outline.

Exhibit 2. Timeline for the Second Advice Letter

Week	Task	Responsible Workgroup Member	EPA Source
Jan 24-28	EPA Briefings – Programs Date TBD	Femi Osidele Roger Rivera Effenus Henderson (Weyerhaeuser)	Rafael DeLeon Raul Soto
	Review EPA Data	Marian Chertow Roger Rivera Effenus Henderson	
Jan 31-Feb 4	EPA Briefings – OCR Report Date TBD	Roger Rivera Femi Osidele Erica Bannerman Effenus Henderson	Rafael DeLeon
	Review EPA Data	Marian Chertow Roger Rivera Effenus Henderson	
	Review Hiring Practices	Marian Chertow	
	Review Employee Surveys	Sara Kendall	
Feb 7-11	EPA Briefings – One EPA Date TBD	Christine Costopoulos Robert Olson	Phil Metzger Bob Perciasepe
	Joint Conference Call – Discuss what was learned from data review and briefings **February 11, 2011** **11:00 a.m.– 12:00 noon EST**	All Workgroup Members	
Feb 14-18	Work on drafting sections and recommendations	Workgroup Members as assigned	
Feb 21-25	Work on drafting sections and recommendations	Workgroup Members as assigned	
Feb 28-Mar 4	First draft of sections/ recommendations to Howard Learner by **March 1, 2011**	Workgroup Members as assigned	
	EPA Briefing – Draft Letter Date TBD	All Workgroup Members	
Mar 7-11	Sections compiled into one letter with notes on what's right, what's wrong, and what's missing	Howard Learner	
	Compiled letter distributed to Workgroup Members on **March 9, 2011**	Howard Learner	
	Joint Conference Call – Review and discuss draft letter; develop plan to finalize letter **March 11, 2011** **3:00 p.m.– 4:30 p.m. EST**	All Workgroup Members	
Mar 14-18	Revised sections submitted to Howard Learner by **March 17, 2011**	Workgroup Members as assigned	
Mar 21-25	Revised draft compiled and edited; distributed to Workgroup Members by **March 21, 2011**	Howard Learner	
	Joint Conference Call – Review revised letter and determine final changes **March 23, 2011** **4:00 p.m.– 5:00 p.m. EST**	All Workgroup Members	
Mar 21-25	Finalize letter	Howard Learner	
Mar 28-Apr 1	Letter ready for NACEPT review		

Ms. Kendall asked the Workgroup to identify the tasks that needed to be done over the next 8 weeks to develop the letter. Mr. Rivera suggested several conference call briefings from EPA staff (e.g., Rafael DeLeon, Raul Soto, Claire Milam) to bring the Workgroup up to speed on some key issues. These would have to take place in the next several weeks. Pointing out that there was a tremendous amount of work to be done, Dr. Chertow suggested that several Workgroup members participate in the briefings and then share the key points with the rest of the group. She wanted to devote her time to reviewing the data and looking at the hiring process. Mr. Rivera asked if she would like a briefing from EPA on the hiring process and Dr. Chertow said she did not think that was necessary. She stressed that EPA needs some fresh ideas, not an analysis of programs that the Agency already knows are ineffective.

Mr. Rivera asked Ms. Jones-Jackson and Ms. Milam to identify the EPA staff members who could be most helpful to the Workgroup. They suggested the following individuals: Raul Soto (or Antoinette), Rafael DeLeon, Nanci Gelb, Claire Milam, Terry Jones (with regard to recruitment), and Victoria (with regard to EJ). Ms. Jones-Jackson thought it would be appropriate to start with Raul Soto and Rafael DeLeon, and she agreed to send an e-mail to Mr. DeLeon to determine his availability. When Mr. Rivera suggested scheduling the EPA briefings for the week of January 24-28, Ms. Jones-Jackson responded that she had no idea when they would be available but she would get back to the Workgroup.

Mr. Rivera thought it would be helpful to hold Workgroup conference calls every 2 to 3 weeks to report on what the members had learned from the briefings and data review. Both Dr. Chertow and Mr. Rivera agreed to examine the resources on the Web site, and Dr. Chertow agreed to provide her insights from the data review to the Workgroup. Ms. Bannerman indicated that she also would like to review the data but she was not sure where her efforts would best fit. Dr. Chertow commented that she would like to compare the Agency's hiring process and time to hire with those of the private sector.

Mr. Learner said he knows of two talented individuals who wanted to work at EPA but they became very frustrated with the length of the hiring process. Deputy Administrator Bob Perciasepe pointed out at the previous NACEPT meeting that EPA is losing good candidates because of the time it takes to hire them. Ms. Bannerman asked if Mr. Learner could document the experiences of those two individuals for the letter. Mr. Learner said that he was not sure that would be useful. EPA already knows there is a problem; the Workgroup needs to ask EPA staff members for their ideas on how to speed up the process. Mr. Rivera noted that the security check requirements add at least 30 days to the hiring process. Ms. Bannerman asked if the Workgroup wanted a briefing from EPA on the Agency's normal hiring process. Mr. Learner pointed out that it is the length of time that puts EPA at a disadvantage; the Workgroup needs to ask EPA about the ideas circulating in the Agency on how to compress the hiring time. Mr. Rivera noted that all federal agencies are constrained by OPM regulations; an agency cannot hire faster without taking shortcuts. He mentioned that the main reason the Federal Intern Program was eliminated was because it was being used to circumvent the long hiring process. He proposed hearing from OPM on what it is doing to streamline the hiring process. Dr. Chertow suggested asking placement officers at university environmental schools about their experiences with the federal hiring process. Mr. Learner agreed that would be a better source of information than the two individuals he mentioned.

Mr. Rivera commented that one problem contributing to the lengthy hiring process was the reduction in human resources personnel. Ms. Milam mentioned that when she joined EPA, there were 250 employees in Human Resources; now there are 70. There are Human Resource Service Centers but she does not have any contacts at these centers. Ms. Jones-Jackson said that many of these centers are operated by contractors, but she was not sure if this was the case for EPA's centers. Ms. Milam stated that Terry Jones would be a good source of information on how many openings are filled and how long it takes. She mentioned that many openings are restricted to current EPA employees. Mr. Rivera thought it would be helpful to assess whether lack of human resources staff is a key issue.

Dr. Chertow expressed some concern about trying to address too many issues (hiring process, barriers to diversity, recruitment, and retention). She suggested postponing the work on the One EPA culture until

April. If the Workgroup does not delay that effort, the members will be overwhelmed. Mr. Rivera agreed that it may make sense to postpone this work (Section III in the outline in Exhibit 1 from Thursday's session).

Ms. Bannerman commented that the Workgroup needs a baseline as well as data on supply and demand. What is the hiring process? What are the barriers to hiring and retaining a diverse workforce? What is the history of diversity at EPA? She mentioned that the National Science Foundation (NSF) generates an annual report that might provide some answers. Ms. Milam stated that the Agency knows a great deal about entry-level recruitment, STEP, and SCEP; she was not sure how much is known about mid-level and senior-level hiring and the associated challenges.

Mr. Alan Bogus (EPA, Office of Human Resources [OHR]) stated that the hiring process takes 150-170 days on average. There are more than 200 occupational services and approximately 2,000 managers are hiring through their offices. These managers do the hiring at the local level and they know what expertise is needed to do the job. With regard to the comment about human resources offices being understaffed, he agreed that OHR could use more people but he thought it was not likely to happen. He asked if the Workgroup members had any questions for him.

Dr. Chertow asked about indicators related to diversity. Mr. Bogus responded that EPA's numbers are down in two areas: the Agency wants to hire more Hispanics and disabled veterans. Dr. Chertow asked if he had compared EPA's diversity statistics to those of other federal agencies. Mr. Bogus responded that he had not made that comparison.

Ms. Bannerman asked how EPA defined diversity. Ms. Jones-Jackson replied that EPA uses the definition that is consistent with the Civil Rights Act.

Referring to the Deputy Administrator's statement at the previous NACEPT meeting that 30-50 percent of EPA's mid- and senior-level managers are eligible for retirement, Mr. Learner asked if this problem was unique to EPA or if other federal agencies were in a similar situation. Currently, many employees are postponing retirement because of the downturn in the economy, but when the economy improves, EPA could experience a significant loss when such a large percentage of the Agency's managers retire. Mr. Rivera commented that other federal environmental agencies are facing a similar problem because of the hiring increase in the 1970s. Although EPA has been concerned about this issue since 2004, little has been done to build the next generation of environmental professionals and leaders.

Mr. Learner asked about EPA's approach for hiring mid-level managers. Are they primarily promoted from inside the Agency or do they come from outside EPA? Mr. Rivera stated that 80 percent of the hires at the mid- and senior levels are from inside the Agency. Mr. Learner pointed out that there should be increasing opportunities for EPA to bring in managers from outside the Agency given that many of the existing managers are eligible to retire and probably will do so in the next several years. Mr. Rivera responded that it is an opportunity at the entry level but not at the higher levels because existing staff move up to fill those positions. Mr. Learner said that if an individual has to rise through the ranks at EPA to obtain a senior-level position then the process needs to change. NACEPT's recommendations could be helpful in addressing such a problem. Mr. Rivera stated that one of the Workgroup's recommendations could be to increase hiring, especially for senior-level positions, from outside the Agency. He mentioned that job announcements often are written to preclude outsiders. Ms. Jones-Jackson commented that she did not think that was a correct statement.

Mr. Bogus stated that EPA has a low attrition rate (approximately 4%). He has data (age, grade, etc.) on the individuals who left the Agency. He also has a timeline mapped out for the hiring process. He was part of a team that examined the hiring process and the barriers that contributed to the lengthy process. He mentioned that EPA has identified some actions that can be taken to reduce the time to hire. Mr. Learner asked him to pull together the available information and provide it to the Workgroup.

Ms. Bannerman stated that there was a schematic and spreadsheet on the hiring process in the resource materials but the detail was not adequate for an analysis. She asked about the headquarters/regions section on the outline. Ms. Kendall responded that the Workgroup should look at the issues under both lenses (i.e., headquarters and regions). Ms. Bannerman pointed out that recruitment at headquarters differs from recruitment in the regions and these differences are not documented.

Ms. Kendall commented that the Workgroup already had discussed culture as a barrier, adding that large organizations have a bias for promoting/hiring insiders. This bias will limit the Agency's ability to achieve its diversity and other goals. Mr. Learner noted two additional barriers: (1) the lengthy hiring process and (2) historical constraints to hiring from outside EPA at a time when the Agency will have a large number of openings. Where does the Agency go to look for potential hires? EPA also needs to create a path for those employees who should be promoted to senior positions. The Agency needs to help these employees move up in the organization through leadership training and development programs. Mr. Learner stated that he could think of a number of actions that the Agency currently is not doing that could benefit EPA.

Mr. Learner noted that there are many issues related to retention. Based on his experience, he has found that the new generation of employees who are 25-35 years old focus on what the organization can do for them to further their careers. The older generation did not have that same focus. He was not sure what caused this change over the years, but EPA's young recruits probably have this same attitude. In addition, this new generation views the workplace differently. They can work as easily from the local Starbucks as from their office. This is a culture shift and the Agency needs to recognize it and adapt to retain its best young employees. Mr. Rivera agreed that this is an important issue to address, particularly as more of the older employees retire. Ms. Kendall thought this discussion related to Section II: Retaining and Developing MCOs and Diverse Talent and Leaders. Mr. Rivera thought retention should be addressed separately, but Ms. Kendall pointed out that retention in general is not a problem; according to EPA, it is only an issue with respect to diversity.

Mr. Learner stated that the issue is how the Agency should retain and grow future leaders for the next generation given the culture changes among the young workforce. Not every employee will be a superstar, but the Agency needs to have a strategy for keeping those who are and a plan for developing them as leaders. For example, the Agency could include them on advisory councils, give them high-profile assignments, select them for special projects to work with senior managers, and offer them detail opportunities in the Agency to expand their skill sets and experiences. He mentioned that Chicago and most major cities have leadership training programs; he has never seen anyone from EPA at the Chicago program. Perhaps EPA should nominate someone for that program.

Mr. Rivera asked the Workgroup members to keep in mind that EPA's retention issue is largely a problem with retaining a diverse workforce. Mr. Bogus stated that he did not have data to support that statement. The attrition rate for the Agency is only 4 percent, but the attrition rate for new hires is higher—10 percent during the first 2 years. Ms. Bannerman said that although that is an interesting statistic, she did not know what it means. Mr. Learner cautioned that EPA's attrition rate may be low today, but the Agency needs to position itself now for when the economy improves and there is increased competition for recruiting and retaining the brightest candidates. He pointed out that a low attrition rate does not indicate whether the Agency has been successful in retaining the employees that it should keep.

Mr. Rivera asked if EPA compiled and analyzed data from exit interviews. Mr. Bogus responded that he was not aware of a formal exit interview process; however, they may be done locally by some managers. Ms. Bannerman stated that the Workgroup should recommend that EPA conduct formal exit interviews and compile and analyze the results. Ms. Milam stated EPA used to conduct exit interviews but the Agency stopped requiring them because the primary reasons for leaving were to go back to graduate school, to deal with family issues, or to move with their spouse who had taken a job in another area. The

interviews did not reveal much useful information. Ms. Bannerman asked if the exit interviews were for EPA as a whole, and Ms. Milam confirmed that they were. Ms. Milam mentioned that there was a high turnover in the grants and contracts group about 10 years ago. The Agency found that most had been hired at lower grades (7 or 9), and they left EPA to take higher grade positions (11 or 13) at other agencies.

Ms. Kendall asked if EPA conducted employee surveys. Mr. Bogus responded that the 70-100 question OMB survey is conducted annually. OHR collects and analyzes the survey results and distributes the information throughout EPA. There are results summaries for each year the survey was fielded. Mr. Bogus replied that OHR also compares the EPA-wide survey results to the private sector. Ms. Kendall asked Mr. Bogus if those summaries could be shared with the Workgroup, and he agreed to provide them to the Workgroup.

Ms. Bannerman asked if an EPA employee would have to go through the entire application process to apply for another position within the Agency. Ms. Milam confirmed that was the case.

Mr. Rivera commented that although OHR manages the hiring process, that office does not make the hiring decisions. Those decisions are made by the 2,000 individual managers around the Agency. He thought that this issue might need to be addressed in a seventh question, but Ms. Kendall thought that this issue was a subset of the hiring question. Mr. Rivera wanted to make sure that the letter addresses how to educate the managers who are hiring employees, and how to create incentives for managers to hire a diverse workforce that reflects the American population. One incentive for increasing diversity could involve holding each manager responsible for the demographic profile of his/her local workforce; failure to reach the defined goals would be considered a negative in the manager's performance review. Another incentive could be to offer bonuses to those managers who met their diversity goals.

Dr. Chertow cautioned against punishing managers for not reaching diversity goals; not everything can be done through incentives. She pointed out that autonomy and decision-making ability are important aspects of job satisfaction so it is good that the hiring decisions are dispersed among 2,000 different managers. Dr. Chertow expressed some concern about looking at whether or not EPA has been successful in retaining its star employees. She thought addressing that question was too far down in the weeds. Mr. Learner said that he had no interest in looking at individual personnel records, but he wanted to make sure the Workgroup addressed Bob Perciasepe's concern about retaining and growing leaders. The Workgroup needs to examine the issue of how the Agency should recruit and retain its stars. There are organizational actions that EPA can take to keep its rising stars, and the Workgroup should recommend that the Agency take these actions.

Ms. Bannerman cautioned against making too many assumptions. She suggested developing some hypotheses and then looking at the data to see if the Workgroup can disprove them. Ms. Kendall commented that EPA did not intend for the Workgroup to do a human resources review because none of the Workgroup members are human resources experts. There are external experiences, however, that the members can bring to bear in reviewing EPA's workforce issues. Although hesitant to do an in-depth analysis of the Agency's human resources program, she was comfortable with describing how such workforce issues are being addressed outside the Agency and offering some suggestions that EPA can consider. Mr. Learner agreed with Ms. Kendall's comments, stating that she was right on target.

Ms. Kendall noted that there is considerable work that needs to be done in a short timeframe. It probably will take 2-3 weeks to gather and review background materials to ensure that the Workgroup's advice is relevant. If a final draft of the letter is to be prepared by March 31, 2011, then the first draft would have to be completed by February 28. She suggested dividing up the topics to be addressed among the Workgroup members.

Dr. Osidele thought the resource materials and briefings would be helpful to the Workgroup in determining what EPA knows, what the Agency has done, and what has worked and what has failed.

Ms. Kendall mentioned that she had included Effenus Henderson's name on the timeline. She explained that Mr. Henderson developed Weyerhaeuser's diversity program and his expertise and knowledge of such programs will be invaluable to the Workgroup.

Ms. Kendall asked the members if they would like to attend the EPA briefings. Dr. Osidele and Ms. Bannerman indicated that they would like to participate; Ms. Bannerman noted, however, that she might not be available to attend them all but she particularly wanted to be involved in the diversity briefing. Mr. Learner asked that those who attend the briefings be prepared to report back to the other members on the Workgroup conference call.

Mr. Rivera thought it might be necessary to schedule additional briefings after the Workgroup has digested the information from the first two briefings and the data review. The Workgroup may have some questions for EPA. Ms. Jones-Jackson said that she did not know Mr. DeLeon's schedule but she knew his report would not be released until January 31, 2011. Mr. Rivera reiterated that another round of briefings may be needed to address the Workgroup's questions. This second set of briefings will impact the deadline for the first draft of the letter. Ms. Bannerman thought it might be more helpful to schedule the second round of briefings after the first draft was developed. Then, specific questions about the draft could be posed to EPA to ensure that the Workgroup is on track.

Mr. Rivera suggested scheduling the briefings and conference calls and circulating the dates to the Workgroup members. Those who are available to attend will participate. Everyone agreed with this suggestion.

Ms. Kendall proposed assigning members to address each of the six questions (see Exhibit 3). She thought two to three members should be assigned to each question if possible, and noted that all Workgroup members would be involved in editing the entire letter. She indicated that Mr. Henderson would assist with reviewing the data and addressing Question 3 on diversity. Ms. Bannerman agreed to help address Question 1 on the hiring process and Question 2 on barriers to recruitment. Mr. Rivera volunteered to assist with Question 1 on the hiring process, Question 2 on barriers to recruitment, and Question 3 on diversity. Dr. Chertow agreed to work on Question 4 concerning supply and demand. Mr. Learner said that he would assist with Question 6 on gaps in leadership development. Mr. Wright volunteered to work on Question 5 dealing with retention issues. Dr. Osidele agreed to help with Question 4 on talent supply and demand as well as Question 6 on gaps in leadership development.

Although Ms. Costopoulos was not present, the Workgroup agreed that she would work on the One EPA culture question, which probably will not be addressed in this second letter. It was suggested that Ms. Costopoulos might be able to start working on this question while the second letter is being prepared. Mr. Olson agreed to assist with addressing this issue. Mr. Rivera thought the Workgroup should notify NACEPT and EPA that it would not be addressing the One EPA culture question in the second letter. Dr. Osidele suggested that the Workgroup begin to work on this question so that it can be touched on in the second letter. Ms. Kendall thought the One EPA culture letter should incorporate recommendations from previous work. This last topic was captured in Question 7 in Exhibit 3.

Dr. Johnson suggested that the Workgroup may want to define the characteristics of the One EPA culture in the second letter. Mr. Rivera said that they would need a briefing from EPA on what the Agency means by One EPA. Dr. Johnson responded that he thought that the Agency meant moving to oneness in thinking as an organization—moving in the same direction. He noted that some companies have thought about this issue and suggested that the Workgroup could look at some examples.

Exhibit 3. Broad Questions for the Data Analysis

Broad Questions

1. What is the hiring process/timeline to hire?
   (**Responsible Workgroup Members:** Roger Rivera **and** Erica Bannerman)
   a. Centralization vs. decentralization
   b. Length of time to complete process
   c. Outreach to diverse pools of talent

2. What are barriers to recruiting employees?
   (**Responsible Workgroup Members:** Erica Bannerman **and** Roger Rivera)
   a. Internal hire preference
   b. Duration of hiring process
   c. Restraints on external hires
   d. Not fishing in all ponds

3. What is the history of the diversity program?
   (**Responsible Workgroup Members:** Roger Rivera **and** Effenus Henderson)

4. What is the balance between talent supply and demand?
   (**Responsible Workgroup Members:** Marian Chertow **and** Femi Osidele)

5. What are the retention issues?
   (**Responsible Workgroup Members:** Sara Kendall **and** Kobi Wright)
   a. Minority predominantly
   b. Age-focus strategies
   c. Employee development and job satisfaction
   d. No exit interview process

6. What are the gaps in leadership/employee development?
   (**Responsible Workgroup Members:** Howard Learner **and** Femi Osidele)
   a. Regional leadership programs
   b. Opportunities for younger employees

7. What are the characteristics needed to achieve a One EPA culture?
   (**Responsible Workgroup Members:** Christine Costopoulos **and** Robert Olson)

Ms. Milam stated that the Executive Council will be talking about One EPA at its next meeting in March. Perhaps the Agency can provide more information to the Workgroup after that meeting.

Ms. Kendall commented that the Workgroup will identify a number of cultural issues in answering the other six questions so she thought the second letter could touch on the culture question. Ms. Jones-Jackson stated that Bob Perciasepe is leading the charge for One EPA. He has asked all of the Assistant Administrators and Regional Administrators to define what One EPA means to them. This is the start of getting the Agency to use its combined talent and knowledge to address issues rather than working as separate offices. Mr. Rivera asked if there is a paper or fact sheet on One EPA and Ms. Jones-Jackson said that she would find out and provide what is available to the Workgroup. Mr. Rivera thought it was a good time for NACEPT to provide advice on this issue because the Agency is just beginning to discuss and implement it.

Ms. Milam asked if the format of this second letter would follow the format of the first letter. Ms. Kendall thought that was a good format—it synthesized issues and presented them clearly without excessive detail and provided understandable recommendations. It was an effective means of offering the Workgroup's

advice. Ms. Milam agreed that it was a good starting point and it presented the advice in a format that was easy to digest. Ms. Jones-Jackson mentioned that Administrator Jackson had read the letter and was very pleased with it.

Ms. Kendall asked if the Workgroup should request a briefing by Bob Perciasepe on One EPA.
Ms. Jones-Jackson said that her office might be able to orchestrate such a briefing in February.
Ms. Milam suggested that Phil Metzger may be more accessible than Mr. Perciasepe and he could address the topic.

Ms. Bannerman asked if the team leads had changed since the last meeting. It was decided that the team leads would remain the same and these members would be responsible for synthesizing the combined response for their topics. Dr. Chertow and Ms. Bannerman have the lead for recruitment, Mr. Learner has the lead for retention and growing leaders, Mr. Rivera has the lead for diversity, and Ms. Costopoulos has the lead for One EPA.

Ms. Bannerman pointed out that someone has to look at the workforce issues from a higher perspective that encompasses all of the questions. Dr. Osidele asked if it was decided that the One EPA culture question would be addressed in a third letter. Ms. Kendall replied that the second letter would include some culture discussion but she thought the Workgroup would need more time to completely address that question. Dr. Osidele thought the next letter should mention the Workgroup's initial thoughts on the One EPA topic and then more detail could be provided in the third letter.

Ms. Bannerman asked if Mr. Learner was the lead for this second letter. Mr. Learner agreed to pull the responses together into a coherent letter and send it to the Workgroup members for review. He will: (1) remind the Workgroup members of their assignments and deadlines to keep it on schedule, (2) make sure that the second letter has a clear roadmap for EPA, and (3) edit the letter to ensure that it reads as one letter rather than combined sections from different authors.

The Workgroup spent some time filling in the timeline presented in Exhibit 2. Mr. Learner said that he expected to receive three or four coherent pieces on different issues by March 1, 2011. He will combine and edit them so that it reads as one letter. He also will identify overlap, missing items, and questions for the members to address. An EPA briefing focusing on the draft letter will be held in early March.
Mr. Learner will send the edited draft back to the Workgroup members for their review by March 9, 2011.
Mr. Rivera thought it might be necessary to have a Workgroup conference call on March 11 to finalize the letter. He asked if EPA would set up the conference calls and if the Agency could provide a notetaker to prepare a summary of the discussions. Ms. Jones-Jackson confirmed that her office would schedule the calls and EPA would provide notetaking support. Mr. Learner said that if the final call is on March 23, 2011, he will distribute the revised letter to the Workgroup on March 21. The Workgroup will discuss what remains to be done on this call and there will be 1 week to complete any remaining tasks so that the second letter can be submitted to NACEPT by April 1.

Mr. Learner stated that the agenda for the March 11 conference call would include a review and discussion of the draft letter report (what is right, what is wrong, what is missing, etc.), as well as development of a game plan for addressing missing items and issues that need to be explored further. The Workgroup also will need to identify any additional information needed from EPA or elsewhere to complete the letter.

Ms. Bannerman said that she would be in executive leadership training in March so she did not know when she would be available for conference calls.

Mr. Olson stated that the Workgroup would welcome EPA's comments on these topics, adding that Agency staff may have ideas that NACEPT should hear and consider in its deliberations.

Mr. Rivera also thought it might be helpful to identify best practices. Is there a place that this information could be included in the letter? Dr. Chertow suggested that best practices be included as examples rather than as a separate section in the letter.

When the question of how EPA defines diversity was raised again, Mr. Rivera responded that EPA defines diversity broadly in terms of geography, age, religion, ethnicity, culture, etc. Ms. Kendall quickly reviewed the questions to ensure that each one had been assigned to at least two Workgroup members. Mr. Learner asked that the flipcharts be typed up and distributed as soon as possible. Ms. Beverly Campbell (The Scientific Consulting Group) agreed to complete this task and provide the typed version of the flipcharts to EPA later that afternoon.

Vulnerable Populations Workgroup Session

Ms. Orosco announced that Dr. Grevatt and Ms. Berger were present to answer questions.

Ms. Loftness asked if something stands out in children's health that the Workgroup should consider for its report. Dr. Grevatt responded that part of the challenge around children's health is that there are important issues in all sections of the Workgroup's matrix, including water quality issues and air issues (both indoor and outdoor). One of the biggest concerns related to the waste program has been both contaminated groundwater and indoor vapor intrusion, and ingestion of contaminated soil. Climate change has an impact on children as well, especially those in lower income brackets. There is not one area that stands out. EPA struggles with health incidence data, which can be spotty in rural areas; this is not a sensing issue, but a data collection and data management issue.

Ms. Filippone noted that based on the work being done on her project, data collection cannot be conducted until children are older. What is the normal age at which monitoring for signs of asthma can begin? Dr. Grevatt mentioned that one issue is biomonitoring. It is not a problem for adults to get a blood sample taken at a physical to be analyzed for the presence of a variety of chemicals. It is more difficult to get blood samples from children. It will be important to develop techniques to work with very small samples to test children and adults, when there are arguments that contamination is coming from a certain source. The population is very mobile, however, so it is difficult to pinpoint a pollutant's source. Ms. Orosco commented that this could be a monitoring issue; there need to be tests that can use less blood, and a more simplistic way to assess communities and contaminants so that if people move, they still can be tracked. She added that a study at Arizona State University was conducted which purported to be on lead testing of Native Americans, including the Havasupai who live at the bottom of the Grand Canyon. Samples were taken, and in actuality the study examined the DNA of Native Americans, which created a setback for people conducting blood screening for indigenous populations. Sensitivity, confidentiality, and transparency of any study conducted are very important.

Mr. Erichsen asked for more information on the data collection in terms of getting information from the local and state levels. Is EPA looking for reports state by state, or does the Agency deal directly with individual counties? What kind of technology is involved, and are there regulations in place that require states and counties to report? Dr. Grevatt replied that patient confidentiality is one issue, and there are rules and regulations that govern the disclosure of personal medical information. The information that would be especially useful to EPA is the incidence of childhood diseases related to environmental factors, for example, asthma incidence and blood lead poisoning. EPA is not seeking individual case information, but locational data. Cleveland and Detroit have serious problems related to blood lead, asthma, and other diseases, and such data will help EPA understand better where those issues are occurring within the cities. With the Lead Action Collaborative in Boston, people within the community are working in collaboration with the city and the state conducted more than 10,000 home visits during a 10-year period to address lead problems. It is difficult for an EPA official or other government official to knock on doors, but it is acceptable if this is done by a member of the community.

Dr. Dysart asked if it was possible to go into a community and determine how many children have asthma. Dr. Grevatt answered that if one were to go into a community and talk to parents, they would be forthcoming, but another source of information may be data on emergency room visits. National statistics show that within Puerto Rican communities in the continental United States, rates of childhood asthma are 1 in 5, which is twice the national average. Dr. Dysart added that the word transparency had been used several times, but he presumed that there are parties who do not want such data to be transparent.

Ms. Filippone asked if EPA coordinated data gathering with the Federal Emergency Management Agency (FEMA), because in cases of flooding in a developed community, flood waters carry a number of pollutants that get into homes, including mold. She has never seen any public outreach regarding the problems associated with mold. There is a need for this information and it should be coordinated with FEMA. Dr. Grevatt responded that EPA coordinates more with the Centers for Disease Control and Prevention (CDC), except in disaster response, when it coordinates with FEMA as well. Dr. Grevatt mentioned that he is co-Chair, along with the Chief Medical Officer in the Secretary of Health and Human Services' office, of a steering committee for an interagency task force on children's environmental health risks and safety risks. Ms. Loftness stated that there is a great deal of mold present in trailers.

On the sensing question, Dr. Grevatt stated that farm worker populations might benefit. These populations are underserved, lower income, often undocumented, and transitory. EPA funded a partner (legal services) in Region 6 working with farm worker populations who come through El Paso for 3 months of the year. Many of the children are living in substandard housing, or are in the fields because of lack of child care, and they can work in farm fields by age 12. Sensing of pesticides would be very helpful because these families move frequently and disease management is extremely difficult.

Dr. Parker noted that a study in Detroit conducting indoor air monitoring was finding mothballs in high concentrations in homes. Vulnerable populations may be using pesticides in their homes that can be dangerous. Dr. Grevatt added that bedbugs are an emerging issue of concern. There is an interagency partnership with CDC and HUD on bedbugs, and part of the concern is that, when faced with an infestation, people may be using pesticides that are not effective. In addition to dealing with the bedbugs, children will be dealing with pesticide exposures. Furthermore, some pesticide applicators may be using banned products. Ms. Loftness commented that EPA needs an overt mandate for indoor air to protect citizens from a host of indoor chemistry challenges, and the solution would involve a combination of sensors and assessment and solution technologies. Dr. Grevatt agreed that indoor air issues are a big problem for EPA.

Dr. Mitchell pointed out that NACEPT is focused on technology needs, so he asked if there was adequate technology to monitor indoor air. Dr. Grevatt answered that monitoring indoor air was not a sustainable solution. From a technology standpoint, the focus should be on education about what to use and how to use it in the indoor environment, as well as adequate ventilation of houses. A growing body of information about weatherization and air exchange exists. Dr. Mitchell asked if there should be a process to standardize testing for mold. Dr. Grevatt responded that mold on surfaces could be tested, but it is too expensive to test for a host of chemicals. Ms. Orosco noted a low-cost, multi-chemical air sensor would be useful. Ms. Berger commented that it would be interesting to determine how many people have tested their homes for radon. Most homes have fire alarms and carbon monoxide alarms, but getting these devices in homes took a concerted effort and building code requirements. This would be a different way of approaching the problem than having indoor air standards. Dr. Grevatt explained that current fire, smoke, and carbon monoxide sensors indicate an immediate hazard. If there was a sensor for mold or radon, what should people do when the sensor goes off? Ms. Orosco noted that alarming people unnecessarily is not a solution. Dr. Mitchell suggested that a humidity sensor might be better.

For communities that have a number of regulated facilities nearby, Dr. Dysart asked if there is some required means of informing people when there is a problem. Dr. Grevatt responded that it would depend on the type of industries there, and what they are likely to be releasing.

Ms. Orosco noted that a common theme among all of the case studies is the need for an alternative means of educating the public and conducting information outreach. Much of the information that NACEPT discusses is available through federal and academic Web sites, but the average person in these communities does not know how to get or interpret this information. Most people trust the information provided by EPA; perhaps one of the Workgroup's recommendations could be that current technologies should be incorporated into the environmental educational process. EPA's outreach needs to be evaluated so that the younger generation will have access to Agency information. A task force could collect the most important information from all EPA offices and regions and disseminate that information through innovative means, such as social networks and cell phones.

Ms. Robinson, DFO for NEJAC, who joined the session to answer the Workgroup's questions, thought that Ms. Orosco had defined the problem well. Information is not getting out to the people, or they do not consider the information they are getting to be reliable. The technology associated with getting information out to people is available but Web 2.0 is not going to reach the most vulnerable populations. EPA has a channel on YouTube and is producing a number of educational videos called "Greenversations." NACEPT recommendations could encourage EPA to take more advantage of these newer types of communications. "EJ View" is an access portal that people can use to learn more about their own communities. It is different from C-FERST, which is more of an assessment tool. With EJ View, users must understand what their concerns are to search for them, and many individuals in local communities do not know how to express their concerns or understand how they relate to an environmental problem. The recommendation could focus on how existing technologies can be used to increase problem understanding and make information accessible to vulnerable populations. Ms. Orosco asked if the Workgroup was addressing the issue properly from an EJ standpoint. Ms. Robinson responded that all these issues are important for vulnerable populations. Ms. Orosco added that one of the stronger points with indoor air is that EPA does not mandate indoor air quality standards; therefore, NACEPT could recommend that the Agency offer guidance to protect vulnerable populations.

Ms. Loftness stated that another issue is flame retardant chemicals. California has the most stringent flame retardant standards in the United States, and these are being adopted by other states. Therefore, every piece of fabric that goes into a building is saturated with flame retardant chemicals. These chemicals now are being found in breast milk and in children in large concentrations. The Green Chemistry Institute is trying to reverse the California standards and put in place alternatives such as physical fire breaks, but the chemical industries are resistant to this idea. The populations in this case study are neonatal, prenatal, and small children. The fire retardant chemicals are no longer required for car seats and strollers. This case is indicative of a host of indoor chemistry problems. Thresholds have not been set, or outdoor thresholds are being used indoors. She thought EPA should be given a mandate to address indoor air as the lead agency, but barring that, there has to be more sensor and metrics research and standards.

Ms. Robinson responded that the Workgroup has identified a lot of the issues and concerns of EJ communities and vulnerable populations. Dr. Mitchell noted that there was a great deal of information about floods and mold that was assembled after Hurricane Katrina. EPA worked with community groups to get the information. He had offered to do a case study on mold in low-income housing, and he was called to a housing development to do an inspection because the buildings had been tightened with federal funds, but they did not put in exhaust fans in the bathrooms or kitchens, so all of the homes have mold, and some have mushrooms growing in their homes. Funding from the state fell through because of budget cuts, and many of the families have had to relocate. Ms. Orosco added that this was another illustration of why indoor air issues need to be addressed. Ms. Robinson noted that this case also illustrates the need for outreach to communities, and to state and local decision makers who are approving these projects;

unintended impacts must be examined at the outset. She mentioned that NEJAC asked the Office of Solid Waste and Emergency Response (OSWER) to examine the unintended impacts of brownfields redevelopment.

Ms. Filippone stated that a simple source for information for local authorities on broad-based indoor health problems is needed and some federal agency must be involved.

Mr. Erichsen described a case study on a Lake Erie beach contamination issue. He was unsure of the vulnerable population in this case, but beaches may be in areas with vulnerable populations, and this case focuses on the only public beach for an 80-mile stretch of shoreline. High levels of fecal bacteria have been found at this beach and warnings have been posted against swimming in the water. The sources are principally nonpoint sources; assessment and identification technologies are needed in this study. He noted that DNA fingerprinting has not been effective in such instances; the technology is both inconclusive and expensive. There is some hope for volunteer monitoring techniques that can give guidance to local agencies in terms of the sampling needed. One is a petrofilm approach, which is a simplified bacteria test that can be incubated in a high school biology laboratory, and another is the use of black light to detect optical brighteners from laundry detergent. Another solution involves treating the water itself to reduce the bacteria loading and developing a system of wetlands to capture sediment. The problem with traditional beach-testing techniques is that it takes 2 days to get the results. He mentioned that there is a U.S. Geological Survey program that uses a beach-specific model and can predict beach safety based on wind direction.

Mr. Erichsen said that another issue was brownfields, but there is a question as to whether many of these sites are amenable to technological solutions. He has never heard the term EJ used in the affected communities, but has heard EJ issues articulated. They typically are viewed as economic issues, and the environment is incidental. There was one proposal to remediate a brownfield neighborhood by building a new residential development. The proposed cleanup was a partial removal of contaminated soils covered with fresh topsoil, and a deed restriction stating that the houses could not have vegetable gardens. That project was not conducted, but it was supported by the local community. Despite the difficulties, perhaps the Workgroup should examine specific needs to address such brownfield problems.

The ultimate solution could be the driving force of economic redevelopment. The usual technique is a phase one survey of who owns the property, and phase two is the onsite survey to determine the contaminants present and the cleanup that would be required. Perhaps it would be useful to stress the importance of brownfield remediation not only to environmental health, but also to revitalization of communities. Are there technologies to address the data search and make the process easier and more accessible? Ms. Orosco said there is a need for bioremediation to be more accessible and affordable. Ms. Robinson commented that EPA co-hosts a national brownfields meeting every year; there likely is a technology track at this meeting from which the Workgroup may be able to glean some information. Ms. Filippone noted that jobs from brownfields redevelopment could elevate the economic standards of those living near these areas, including vulnerable populations. Dr. Mitchell stated that there is an open request for proposals for brownfields training.

Dr. Parker said that when she read the case study on Lake Erie, she thought the children could be the vulnerable population. Dr. Mitchell mentioned that most EJ communities do not have access to beaches. Ms. Orosco noted that as new technologies are developed and more locations are sampled, the issue of brownfields will explode. She agreed that brownfields can become an engine for community development. Dr. Dysart commented that EPA has identified thousands of abandoned textile mills and they typically are in low-income mill villages.

Ms. Nash mentioned that many of the case studies are examining legacy problems, and she raised the possibility of including a facility siting case study that would be prospective. She would be willing to work on such a study.

Ms. Orosco stated that, in tribal communities, cellular phone companies are allowed to put out more wattage than in residential areas and there are large towers located adjacent to homes. The companies get contracts with the tribes because it is easier and cheaper to go through federal lands and deal with federal regulations than to go through municipalities and deal with local regulations. People who live near the towers think they are impacting their health. She has been trying to conduct research to determine if there is any observed heath effect, but the data are conflicting. Perhaps this is an area of research that ORD could undertake to help the American public understand the potential risks.

Ms. Loftness described a case study on the issue of sprawl. Two aspects of sprawl are addressed in the research literature. The disaggregated lifestyle means that children are not getting any physical exercise, which leads to obesity. In addition, there is the issue of abandoned buildings. Most of the areas where sprawl is occurring do not have growing populations, so residents are displaced and neighborhoods no longer have basic services. She would like to raise this issue in the report because it is a partnership issue, and deals with shifting attitudes about appropriate development patterns. Ms. Orosco added that the sprawl creates EJ communities.

Dr. Mitchell explained a case study on a Waterbury, Connecticut, food-to-energy facility. Waterbury is a densely populated urban area in a deep valley. In the middle of the valley is a river with an industrial park along the bank in a large Latino neighborhood. Approximately 4 years ago, a liquefied natural gas facility was built. Environmental groups were opposed to such a facility in the Long Island Sound 7 miles off the shore because they believed it was too dangerous. Two years ago, a new natural gas power plant was built in the same neighborhood. The stacks of the power plant reached the level of the houses in the surrounding hills. Last year a food-to-energy facility was proposed, which would have been the largest in the United States. The plan was to take waste food and through anaerobic digestion produce methane, which would be used in turn to generate electricity. One hundred trucks of garbage per day would have to be brought into the city to feed this facility. The community was concerned that the technology had not been proven at this scale. Additional concerns included the diesel fumes from the trucks, odors, spillage, and disposal of the sludge left over from the anaerobic digestion. Eventually, construction of the facility was blocked by the community. Ms. Loftness suggested a solution set technology, which is that all power generation or waste facilities should always be paired between a wealthy community and a poor community. Dr. Mitchell added that many biomass facilities are built as alternatives to incinerators, and are referred to as "incinerators in disguise." The biomass is disposed of in a two-step process in which it is heated, releasing gas, and then it is burned. These types of facilities often are built in EJ communities.

Dr. Mitchell's next case study involved New Bedford polychlorinated biphenyl (PCB) contamination. New Bedford, Massachusetts, used to be the world center for whaling in the 1800s. New Bedford also had two facilities that produced electrical capacitors, but when TSCA went into effect in 1976, PCBs no longer could be used. These facilities were located along the river where it met the harbor, and there was considerable PCB contamination. It was not clear whether if the PCBs were released accidentally or if they were being dumped into the river. In addition, there were a number of dumps all around the city that contained PCBs. The largest dump was closed in the 1970s, and in the 1980s, the city's high school was built on top of that dump. In 2004, a middle school was built on that dump site as well. In addition, private and public housing started encroaching on the area. There are high levels of PCBs on all of these properties, and the border of the dump is unclear. There are three housing projects in the area that flood whenever there is significant rain. People are complaining of a number of different illnesses and diseases, and when the children play in the dirt, they develop rashes. People want to know if their houses are affected. Cost-effective soil testing technologies for PCBs and dioxins are needed. Ms. Filippone mentioned that New Jersey had a buyout program for housing built on landfills. Mr. Erichsen noted that game-changing technologies for remediation of PCBs would be very welcome because the problem is widespread.

Dr. Dysart explored what is meant by "vulnerable populations" in EJ communities starting with the EJ Executive Order, and following it with various documents through 2010. He asked EPA staff how they defined vulnerable populations, and was told that EPA uses the definition from regulations and relevant documents, such as the Superfund risk assessment guidance from 1989. He said he flagged mention of vulnerable populations and EJ in nine documents; the theme of vulnerability is evident, as are low income and/or minority populations. Dr. Dysart agreed to write a few pages on the definition of vulnerable populations and send them to Workgroup members for discussion and review.

Directly after the EJ Executive Order was issued in 1994, every agency was supposed to develop a plan for implementation. Not much has been done, however, since then, but Administrator Jackson wants EJ to be a priority at EPA. This Workgroup has an opportunity to provide some guidance to the Agency and should create a credible and substantial report to advise EPA. Ms. Loftness asked if Dr. Dysart could provide a list of who is included in vulnerable populations because the Workgroup needs to summarize the position of these populations. Dr. Dysart responded that the OIG's 2004 report stated that without a definition from EPA, the Regions were developing their own definitions and approaches, and there were several regional definitions of low income. He noted that the level of protection provided to EJ communities depends on where in the country they are located. Mr. Erichsen added that at the state level, EJ policies vary. Ms. Orosco mentioned that another issue concerns how to implement federal initiatives. The Workgroup may have some ideas on this after further work is completed. Ms. Filippone asked about the difference between EJ populations and vulnerable populations and how they will be differentiated in the report. Dr. Dysart explained that the Executive Order was very specific on EJ, and discussed low-income and/or minority communities. That is a subset of vulnerable populations, which include the elderly, children, and those in jobs causing exposures.

Ms. Filippone suggested that the group think about other case studies that could be included; additional case study ideas should be submitted to Dr. Mitchell as soon as possible. Dr. Mitchell recommended that the Workgroup determine what additional studies are needed while at the meeting. Ms. Filippone suggested that areas where children play, such as schools or sport fields, should be considered in a case study.

Mr. Joyce noted that the Workgroup's recommendations should be actionable by EPA. Although the recommendations will be made to the Agency, they will have effects that extend beyond EPA. If there is a need for a new technology, developers and venture capitalists will be interested, particularly if there is a market for it. Case studies should focus on severe environmental problems in areas where there have not been adequate solutions to date and where there is needed technology that is not available; this Workgroup should identify those areas and types of technologies needed. This is what ORD needs to act upon, so that is what should be included in the report submitted by the Workgroup. Ms. Filippone asked if the fact that some of these technologies are not available in the United States creates a need for them to be developed domestically. Mr. Joyce responded that if there is a market, a U.S. company will attempt to develop the technology or license it from the foreign developer. Ms. Orosco agreed that the group needed to stay focused on achievable recommendations.

Ms. Nash noted that someone needs to write a longer narrative on the charts that Ms. Loftness and Ms. O'Donnell developed to create a context for the significance of the case studies. Ms. Loftness will transcribe the chart and start the narrative. She will need help, however, to complete it. There are three broad categories of technologies being discussed: sensors and measurement technologies; assessment, analysis, and communication technologies; and solution set technologies. Each case study should be summed up in a clear declarative sentence on the recommendation(s) to EPA relative to that case study. Ms. Orosco suggested that Workgroup members create a form asking for basic information relevant to case studies and e-mail it to the other members. Mr. Joyce recommended including as much specificity and detail as possible on the needed technology.

Dr. Mitchell asked to see the chart again to identify gaps. More work on energy as an environmental safety issue is needed, and Dr. Mitchell agreed to write a case study on power plant siting. Ms. Loftness noted that climate change impact was another gap, but it can be placed under each of the other categories.

Mr. Joyce stated that it must be clear who will complete each task. The intent was to draft and review case studies and determine which ones would be included to focus the report. A range of issues have been discussed, and one of the strengths of the case study approach is that these are known severe problems; there must be documentation and justification as to why recommendations are being made. He thought the Workgroup will need some conference calls to discuss the progress between now and the next meeting.

Dr. Mitchell agreed to write a case study on mold and public housing, and the need for indoor air sensors. Mr. Joyce commented that Dr. Hauchman had offered to put members in contact with some of the experts at ORD and other parts of the Agency to help them further refine the recommendations. That would be the next step after specific case studies are selected. Dr. Hauchman noted that EPA staff members are actively working on some aspect for a number of the needed technologies. After the Workgroup sharpens its focus on what technologies are needed, a conversation could be conducted with the Workgroup and individual experts at EPA. Ms. Orosco suggested setting up a conference call with some of the EPA experts within the next quarter. Dr. Mitchell pointed out that the Workgroup first must decide which case studies will be the focus of the report. Mr. Joyce suggested that the group select five or six core case studies and include other shorter illustrative ones. Ms. Orosco suggested that the Workgroup members complete a 10-question form on their case studies, and then use that information to prioritize and select the case studies. She volunteered to create the form by January 28, 2011. Ms. Loftness agreed to prepare a description of the three matrix categories and delineate which actions are the most critical for EPA to take. Ms. Filippone, Dr. Mitchell, Mr. Erichsen, Dr. Parker, and Ms. Nash will complete additional case studies within 1 week after the 10-question forms are received.

Ms. Orosco added that the Workgroup also would create a narrative to accompany the matrix. Dr. Dysart suggested that the Workgroup also capture the thought that technology would not solve all problems.

Dr. Mitchell said that much should be covered in the background material, such as the importance of policy. Ms. Loftness added that the case studies were very location- and title-specific, and it would be useful to have generic titles for the dialogue that summarize the point illustrated by each case study. Ms. Filippone recommended that this be one of the questions in Ms. Orosco's form. Dr. Mitchell asked if anyone was willing to start drafting the background information. Ms. Orosco agreed to work with Dr. DeWitt John on this task.

Exhibit 4. Vulnerable Populations Workgroup Matrix

Media/ Topic	Attributes/ Stressors	A Measurement Technology & Science	B Data Assessment & Communication Technology	C Solution Technology & Science	Case Studies
		Sensors Portable, pt, non pt, mobile Metrics/chronic and acute thresholds Biomonitoring Crop/soil testing Legacy and new Health/environmental consequences	Mapping vs. thresholds Scientific evaluation of consequences Communication, decision-making, with social/ human factors, info people can trust GIS for integrated stressor risk assessment, health of mobile pops policy/ investment	Prevention Remediation New technologies, demonstration of international advances, hybrids, cost/performance improvements Published proven solutions	

Media/ Topic	Attributes/ Stressors	A Measurement Technology & Science	B Data Assessment & Communication Technology	C Solution Technology & Science	Case Studies
Water	Water quality Point sources Non-point sources Building water quality Water availability Flooding, CSO Climate change Water Superfund sites?	Mold sensors for flood impacts DNA? Non-point source analysis	Scientific evaluation and ecological impact Ecoservices Beach safety definition and communication C-FERST	Innovative sediment cleaning technologies Wetland engineering/ science Eliminate flooding as CSSO tech	Passaic River Erie Beaches Sick fish CS minus SO
Outdoor Air	Outdoor air quality Climate change Power plants Transportation Industry Air Superfund sites?	Industrial alarms Continuous vs. peak Cheap, portable sensors, benzene Particulates	C-FERST Displays	Innovative incineration technologies Chemical/thermal	Chemical Corridor Train wreck Rubbertown
Indoor Air/ Buildings	Indoor air quality Indoor chemistry Pests Ventilation maintenance Material toxicity Mold Persistent toxins Heat	Indoor chemistry thresholds/ sensors PM, Mold, VOC, formaldehyde Flame retardants Simple blood levels of toxins Mold Mechanisms/links to respiratory	Assessment of pervasiveness Avoiding/solving unintended impacts of weatherization Standards: paints, pesticides, deodorizers, etc.	Integrated pest management (IPM) Ventilation/fresh air Green schools Mold prevention/ remediation Green chemistry Integrated mold management	Tribal housing mold Fire retardants
Waste	Solid waste Transport Landfills Incineration MRF (recycle)	Toxicity sensors Landfill alarms, PCBs, dioxins	Toxicity maps Incinerators in disguise	MRF solutions Paired installations (EJ and top 5% neighborhoods) Process-discharge-transport techs	CT Incinerators
Land/Soil	Brownfields Abandonment Transportation/ mobility Access to parks ++ Food quality	Airborne/ ingested pesticides	Landfill/no build maps, schools and EJ housing	Brownfield cleanup technologies Phytoremediation	Tribal pesticide and herbicide ingestion Farm workers
Land use/ transpor-tation		Idling car/buses pollution/impacts Airline lead, noise	Assessing health impacts of diverse land use patterns, EJ immobility, loss of services with abandonment	Smart growth solution sets DOT/HUD partnerships	Sprawl single use zoning and abandonment
Reliable/ Safe Energy Sources	Energy sources & EQ Reliable power	Power/cell line metrics			Food to Energy More to come
Cross-cutting Challenges	EPA to ensure innovation across silos/ environmental consequences – air, water, soil, land use, energy, especially when addressing climate change and homeland security.				

NACEPT Plenary Session To Discuss Workgroup Updates

Vulnerable Populations Workgroup Report

Dr. Mitchell reported that the Vulnerable Populations Workgroup compiled some case studies and determined how they will fit into a report, and began sharpening its recommendations and focus on what types of technologies can address some of the issues in vulnerable populations. The Workgroup has identified some gaps where additional case studies are needed, and has developed a process to prioritize the case studies. The Workgroup also has begun to examine the narrative for the report, which will include the statement that technology is necessary but not sufficient to solve many of the problems outlined. Ms. Orosco added that the Workgroup also was developing a matrix so that the information would be easily accessible, with a narrative for supporting documentation. The Workgroup estimates that a draft report will be completed in 6 months, and a final report will be prepared by the end of the calendar year. Writing assignments have been delegated to different Workgroup members. Dr. Mitchell added that Dr. Dysart was working on developing a definition of vulnerable populations, which will be raised with the Workgroup again so that consensus can be reached.

Dr. Johnson mentioned that NACEPT would likely meet in September 2011, and it would be useful to have an actionable final report for review at the September meeting.

Workforce Issues Workgroup Report

Mr. Learner noted that the Workgroup consisted of himself, Mr. Wright, Mr. Rivera, Ms. Kendall, Ms. Bannerman, Ms. Costopoulos, Dr. Osidele, Mr. Olson, and Dr. Chertow. Initially, the Workgroup reviewed a former plan that involved the development of three separate letters, and consolidated the plan into one letter. The Workgroup then created a schedule with different members taking on different constituent elements. This should come together by the end of February, and sometime between March 1 and March 9, the separate pieces will be combined into a draft that will be discussed in a conference call on March 11, 2011. Another call will be held on March 21, 2011 to review changes to the letter, and by the end of March or beginning of April, the Workgroup will have a final draft to circulate to the full NACEPT for additional comments. Ms. Kendall and Ms. Campbell pulled together the paper notes generated in the session and that will be distributed to the Workgroup. These notes will lay out the roadmap of the work that is being done by the various members. Mr. Rivera added that the Workgroup's timeframe was accelerated at the request of EPA; the Agency wants NACEPT's views on workforce issues as soon as possible. Dr. Johnson stated that if the letter is completed by the April 1 deadline, NACEPT could act on it at the May meeting.

Public Comments

There were no public comments.

Chair's Summary and Next Steps

Dr. Johnson will ask several members to serve as primary reviewers of the workforce issues letter and the vulnerable populations report. That will aid in NACEPT's quality assurance/quality control efforts to ensure that what is submitted to EPA by the Council is representative of NACEPT's best work. Those members who were not as actively involved in drafting the letters or report would be excellent candidates for reviewers. The reviewers need to determine whether the Workgroup has responded to the charge, and whether the recommendations made are supported in the document.

Dr. Johnson told the Council that the next meeting likely would be held in May 2011. Mr. Joyce asked the members present at the meeting if May 19-20, 2011, would be amenable. He noted that he would send an e-mail to all members to get their formal response.

Dr. Johnson reminded the NACEPT members to complete the evaluation forms in their packets and offer suggestions that would improve the meetings.

Mr. Olson commented that in production of the first advice letter, Mr. Joyce and Ms. Megan Moreau (EPA, OFACMO) arranged many conference calls at short notice, and participated in the conference calls, which was extremely helpful.

Mr. Rivera stated that in the summary of recommendations in the revised workforce issues letter, he did not see the issue he had raised the previous day regarding homeland security and emergency response in a scenario that EPA would have to face within the next 10 years. Mr. Olson responded that it was not addressed as a scenario, but added to pages 6 and 7 in the section on EJ issues, and inserted in the matrix on page 7 in the section on maintaining and imroving capabilities for emergency preparedness and response and homeland security. Mr. Rivera noted that the events of September 11, 2001, were not EJ issues. In the next 10 years, if there is a terrorist attack on the United States with environmental implications, EPA will have to respond and this is entirely a homeland security issue. Mr. Olson replied that he would have to reassemble the Workgroup to create a scenario on this issue. Dr. Johnson added that NACEPT had voted to leave it to him and Mr. Olson to work on the letter. There may be some places in the letter where the Workgroup could cite homeland security as one of the big problems facing the Agency.

Mr. Joyce thanked the EPA staff members who had attended the meeting and responded to NACEPT's questions. He noted that the Program Offices are key partners in these enterprises. He thanked Ms. Jones-Jackson for coordinating the meeting, Ms. Stephanie McCoy (EPA, OFACMO) for her work on travel planning, Ms. Debbie Lake-Hinkle (EPA, OFACMO) for securing the facilities, and Ms. Moreau who has been an immense help in working with the Council members to help prepare for the meeting. Finally, he thanked the Council members who contributed to the first Workforce Issues Advice Letter, and Dr. Johnson and Mr. Learner for serving as the NACEPT Chair and Co-Chair.

Dr. Johnson adjourned the meeting at 12:01 p.m.

Action Items

- ✧ Ms. Loftness will send Mr. Olson an expanded list of suggested disciplines for the Workforce Issues Workgroup to consider.

- ✧ Dr. Johnson and Mr. Olson will make the changes to the Workforce Management Advice Letter based on the recommendations that the NACEPT members made during the meeting.

- ✧ Mr. Joyce will e-mail members to suggest and confirm a meeting date for May 2011.

- ✧ The following action items were identified for the Vulnerable Populations Workgroup:

  - ➢ Dr. Dysart will write a few pages on the definition of vulnerable populations and send it to Workgroup members for discussion and review.

  - ➢ Ms. Loftness will transcribe the matrix and begin the narrative. She will create a description of the three categories in the matrix and delineate which actions are the most critical for EPA to take.

  - ➢ Ms. Orosco will create a 10-question form on the case studies by January 28, 2011.

  - ➢ Ms. Filippone, Dr. Mitchell, Mr. Erichsen, Dr. Parker, and Ms. Nash will complete additional case studies within 1 week after the 10-question forms are received.

  - ➢ Ms. Orosco agreed to work with Dr. DeWitt John on drafting background material for the report.

- ✧ The following action items were identified for the Workforce Issues Workgroup:

  - ➢ Ms. Jones-Jackson will request that the document Mr. DeLeon is working on, which is expected to be released by January 31, 2011, be provided to the Workgroup as soon as possible.

  - ➢ Ms. Jones-Jackson said she would ask Mr. DeLeon if there is a summary available on EPA's diversity programs. She will provide what is available to the Workgroup.

  - ➢ Ms. Milam agreed to provide EPA retention data, which she will obtain from a colleague, to the Workgroup.

  - ➢ Ms. Jones-Jackson will send an e-mail to Mr. DeLeon to determine his availability to brief the Workgroup. Mr. Rivera suggested that she check his availability for the weeks of January 24-28 and January 31–February 4. She also will have someone check on Raul Soto's availability.

  - ➢ Dr. Chertow will examine the resources on the NACEPT Web Site, and provide her insights from the data review to the Workgroup during one of the conference calls.

  - ➢ Mr. Bogus will provide to the Workgroup the timeline for the hiring process and information on barriers that contributed to the process as well as any actions EPA has identified that could shorten the process.

  - ➢ Mr. Bogus will provide to the Workgroup the results of the annual employee surveys and the summary analysis done by OHR.

  - ➢ Ms. Jones-Jackson will find out if there is a paper or fact sheet on One EPA; she will provide any available information to the Workgroup.

- Ms. Jones-Jackson will determine when Bob Perciasepe or Phil Metzger would be available to brief the Workgroup on One EPA.

- Ms. Campbell agreed to type the information on the flipcharts and submit it to EPA and Ms. Kendall for review on the afternoon of January 21, 2011.

National Advisory Council for Environmental Policy and Technology (NACEPT) Meeting Participants

NACEPT Members

Ms. Erica Bannerman
Senior Environmental Specialist
Department of Transportation and Environmental Services
Office of Environmental Quality
City of Alexandria
Alexandria, VA

Dr. Karl Benedict
Director
Earth Data Analysis Center
University of New Mexico
Albuquerque, NM

Dr. Marian Chertow
Associate Professor
Center for Industrial Ecology
School of Forestry and Environmental Studies
Yale University
New Haven, CT

Ms. Christine Costopoulos
Director of Environmental Policy
NYS Department of Economic Development
Empire State Development
Albany, NY

Dr. Ben Dysart
Principal
Dysart and Associates, Inc.
Nashville, TN

Mr. Kurt Erichsen
Vice President
Environmental Planning
Toledo Metropolitan Area Council of Governments
Toledo, OH

Ms. Ella Filippone
Executive Director
Passaic River Coalition
Morristown, NJ

Dr. James H. Johnson, Jr. (*NACEPT Chair*)
Professor and Dean Emeritus
Department of Civil Engineering
Howard University
Washington, DC

Ms. Sara Kendall
Vice President
Environment, Health and Safety
Weyerhaeuser Company
Federal Way, WA

Mr. Howard Learner (*NACEPT Vice Chair*)
President and Executive Director
Environmental Law and Policy Center
Chicago, IL

Ms. Vivian Loftness
Professor of Architecture
Carnegie Mellon University
Pittsburgh, PA

Dr. Mark A. Mitchell
President
Connecticut Coalition of Environmental Justice
Hartford, CT

Ms. Jennifer Nash
Senior Research Associate
Nanotechnology & Society Research Group
Northeastern University
Boston, MA

Ms. Arleen O'Donnell
Vice President
Eastern Research Group, Inc.
Lexington, MA

Mr. Robert L. Olson
Senior Fellow
Institute for Alternative Futures
Alexandria, VA

Ms. Kristie Orosco
Director of Environmental Protection and Compliance
San Pasqual Band of Mission Indians
Valley Center, CA

Dr. Olufemi Osidele
Senior Research Engineer
Geosciences and Engineering Division
Southwest Research Institute
San Antonio, TX

Dr. Edith A. Parker
Associate Dean and Associate Professor
Department of Health Behavior and Health Education
School of Public Health
University of Michigan
Ann Arbor, MI

Mr. Roger Rivera
President
National Hispanic Environmental Council
Alexandria, VA

Mr. Barry Worthington
Executive Director
United States Energy Association
Washington, DC

Mr. Kobi Wright
Corporate Counsel
Cummins, Inc.
Indianapolis, IN

NACEPT Acting Designated Federal Officer

Mr. Mark Joyce
U.S. Environmental Protection Agency
Office of Federal Advisory Committee Management and Outreach (OFACMO)
1200 Pennsylvania Avenue, NW (1601M)
Washington, DC 20460
Phone: (202) 564-2130
E-mail: joyce.mark@epa.gov

EPA Participants

Martha Berger
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone: (202) 564-2191
E-mail: berger.martha@epa.gov

Alan Bogus
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone: (202) 564-0228
E-mail: bogus.alan@epa.gov

Geraldine Brown
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone: (202) 564-4235
E-mail: brown.geraldine@epa.gov

Nanci Gelb
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone: (202) 564-1146
E-mail: gelb.nanci@epa.gov

Andrew Geller
U.S. Environmental Protection Agency
109 TW Alexander Drive
Research Triangle Park, NC 27709
Phone: (919) 541-4208
E-mail: geller.andrew@epa.gov

Eugene Green
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone: (202) 564-2432
E-mail: green.eugene@epa.gov

Peter Grevatt
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone: (202) 564-8954
E-mail: grevatt.peter@epa.gov

Fred Hauchman
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone: (202) 564-3151
E-mail: hauchman.fred@epa.gov

Cynthia Jones-Jackson
Acting Director, OFACMO
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone: (202) 564-2321
E-mail: jones-jackson.cynthia@epa.gov

Stephanie McCoy
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone: (202) 564-7297
E-mail: mccoy.stephanie@epa.gov

Claire Milam
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone: (202) 564-5320
E-mail: milam.claire@epa.gov

Megan Moreau
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone: (202) 564-7582
E-mail: moreau.megan@epa.gov

Antoinette Powell-Dickson
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone: (202) 566-0738
E-mail: powell-dickson.antoinette@epa.gov

Victoria Robinson
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Phone: (202) 564-6349
E-mail: robinson.victoria@epa.gov

Other Participants

Rend Al-Mondhiry
CHPA
E-mail: ral-mondhiry@chpa-info.org

Bridget DiCosmo
Inside EPA
Phone: (703) 562-8748
E-mail: bdicosmo@iwpnews.com

Daniel Semick
Government Accountability Office
E-mail: semickd@gao.gov

Anna Willett
ITRC
E-mail: awillett@ecos.org

Contractor Support

Beverly Campbell
The Scientific Consulting Group, Inc.
656 Quince Orchard Road, Suite 210
Gaithersburg, MD 20878
Phone: (301) 670-4990
Fax: (301) 670-3815
E-mail: bcampbell@scgcorp.com

Mary Spock
The Scientific Consulting Group, Inc.
656 Quince Orchard Road, Suite 210
Gaithersburg, MD 20878
Phone: (301) 670-4990
Fax: (301) 670-3815
E-mail: mspock@scgcorp.com

National Advisory Council for Environmental Policy & Technology

Final Agenda
January 20-21, 2011

Hilton Garden Inn
815 14th Street NW
Washington, DC 20005
Tel: 1-202-783-7800

Thursday, January 20, 2011

8:30 am **Registration**

9:00 am **Welcoming Remarks and Introductions**

- Mark Joyce
  NACEPT Acting Designated Federal Officer
  Office of Federal Advisory Committee Management and Outreach (OFACMO)
- Cynthia Jones-Jackson
  Acting Director, OFACMO

9:15 am **Overview of Agenda**

- Dr. James H. Johnson, Jr.
  NACEPT Chair

9:30 am **Remarks by Administrator Lisa P. Jackson**

10:30 am **Break**

10:45 am **Vulnerable Populations Panel Discussion**

- Mark Mitchell, M.D., M.P.H.
  NACEPT Vulnerable Populations Co-Chair
- Fred Hauchman
  Director, Office of Science Policy
  Office of Research and Development

- Peter Grevatt
  Director, Office of Children's Health Protection
  Office of the Administrator
- Heather Case
  Acting Director, Office of Environmental Justice
  Office of Enforcement and Compliance Assurance
- Victoria Robinson
  Designated Federal Officer
  National Environmental Justice Advisory Council (NEJAC)
  Office of Enforcement and Compliance Assurance

12:15 pm **Lunch (on your own)**

1:45 pm **Application of Science and Technology to Community Exposure and Risk Assessment**

- Andrew M. Geller, Ph.D.
  Chief, Exposure Modeling Research Branch
  National Exposure Research Laboratory
  Office of Research and Development

2:30 pm **Overview of NACEPT Advice Letters on EPA Workforce Development**

- Robert L. Olson
  NACEPT Workforce Issues Workgroup Co-Chair
- Nanci E. Gelb
  Principal Deputy Assistant Administrator
  Office of Administration and Resources Management

3:30 pm **Break**

3:45 pm **Public Comments**

4:00 pm **Discussion and Approval of Initial NACEPT Advice Letter on EPA Workforce Planning: *Scientific and Technical Competencies to Meet Tomorrow's Challenges***

4:30 pm **Workforce Issues and Vulnerable Populations Workgroups meet in separate, concurrent sessions.**

6:00 pm **ADJOURN**

Friday, January 21, 2011

8:30 am **Workforce Issues and Vulnerable Populations Workgroups meet in separate, concurrent sessions.**

11:00 am **Break**

11:15 am **Workgroup Updates** *(Reconvene in Plenary)*

12:30 pm **Public Comments**

12:45 pm **Chair's Summary and Next Steps**

2:00 pm **ADJOURN**

Chair Certification

I, Dr. James H. Johnson, Jr., Chairman of the National Advisory Council for Environmental Policy and Technology (NACEPT) certify the meeting minutes for January 19-20, 2011 are complete and accurately reflect the discussions and decisions of said meeting.

/*Signed*/ **04/17/11**

Dr. James H. Johnson, Jr., NACEPT Chair **Date**